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ART. I.—*Desultory Notes of a Medical Traveller.* In a letter to one of the Editors, dated Staunton, Virginia, July 7th, 1840.

ON Saturday, the 4th inst., I found myself among a large assembly of people that had collected from various points to witness the commencement of the University at Charlottesville, an institution of which Virginians may justly feel proud. Among the graduates were eight who received the honors of our profession, at least so far as the degree of this institution could confer them; for on conversing with some of them, I

soon discovered they did not consider their education completed, as, notwithstanding the rigorous examinations through which they had passed, all expected to attend some other school for a degree—the University of Pennsylvania appeared to be the favorite with most of them, though State pride will induce others to go to the new school at Richmond;—Louisville presents the greatest attractions for all who expect to settle in the great Valley of the Mississippi.

You should have received a more extended account of this institution, and of the pleasant town near which it is situated, but my visit was very short, and unfortunately on a gala day, when all were intent upon the approaching festival and the ceremonies of commencement. Every thing appeared in holiday garb, which you know is not very favorable for critical scrutiny; my impressions were very agreeable, and incline me to accord to the institution a very high rank,—one which, perhaps, even exceeds the most sanguine anticipations of its patriotic founder. Of the Professors in the medical department I can say nothing, not having had the good fortune to meet any of them. They appear to stand high, but their practice must be limited, as this is a remarkably healthy region, not densely inhabited, the town small and containing other physicians. These circumstances, in connexion with the small size of the class, and the want of a hospital, must render it any thing but a desirable residence for one ambitious for distinction in the profession.

Of the buildings, I may say that they are commensurate with the expanded views of their projector, who, from the heights of Monticello, looked upon the beautiful undulating plain at the base of the Blue Ridge, observed its capabilities, and, prompted, no doubt, by the most benevolent motives, determined to erect an institution worthy of his glorious

state. The arrangement is rather diffuse, but the effect is good when observed from certain points. The plan is a very expensive one, and every thing has been constructed in the best manner. The lecture rooms are in a large building, the college proper, that also contains a magnificent rotunda, the depository of an extensive and valuable library. The upper gallery of this rotunda is appropriated to objects of natural history, where I expected to have found complete suites of the Virginia naiades, and at least a collection of specimens illustrating the interesting geology of this great state: neither the one nor the other is there—excepting a suite of the tertiary fossils of the tide water marls; though they have a very fine mineralogical cabinet from all other parts of the world.

The road from Charlottesville passes through a fine rolling country, to the foot of the Blue Ridge that is crossed at Rock-Fish Gap, where the traveller is presented with a glorious prospect to the south and east. Here, we bid adieu to the "Old Dominion," and leave behind us the metamorphic rocks with their auriferous quartz and dykes of trap, a series that are exciting very great interest among geologists, some of whom have supposed that the micaceous schists and epidotic rocks of this region are altered shales, so modified by the irruptions of trap as to have lost all their external distinctive characters. On the western declivity of the mountain, the road is rough in consequence of the strata dipping to the south-east, but no opportunity was presented for tracing their connexion with the limestones of the "Valley of Virginia." These rocks appear identical with those of the Cumberland valley of Pennsylvania—they are all upturned at a considerable angle, and in some places, perhaps overturned, especially near the Blue Ridge. It is in such a situation that the celebra-

ted Weir's cave is found, and it is very probable that the confusion of the strata in the overthrow may have aided in the formation of this extraordinary and most beautiful cavern, the wonderful productions of which I shall not attempt to describe, as nothing but the pen accustomed to voyage in fairy land could possibly do justice to the surpassing beauty of the scene. The curious figures and memnonian sounds are alluded to in the following lines:

> In yonder grot
> Where forms fantastic hang on either hand,
> Where jewels glisten like the golden sand,
> And every tint that glows in western skies
> Is there reflected, as from Argus' eyes,
> While the mute gazer stands, or gropes along
> The pipes of crystal hail him with their song—
> For there — so far within the terrene world
> The rocks are struck, and music is unfurled.
>
> ANONYMOUS.

But leaving the cave and its poets, and returning to sober prose, I must advert to some of the general features of this "Valley." Bounded by the Blue Ridge and North mountain, it embraces a large extent of rolling limestone land, some of which is very fertile, and in which rise some of the principal rivers in the state. I am now nearly midway between the mountains, in an elevated region on the head waters of the Shenandoah. This town has been selected for its healthy and central situation as the site of several public charities, among which are the Lunatic Asylum, and schools for the blind, and for deaf-mutes The latter are still in their infancy, though a fine building is in progress for the mutes; the corner stone is to be laid with due ceremony to-morrow. Great additions are also making to the Lunatic Asylum, already a large edifice, but insufficient for the wants of the state. I

was gratified to find that the moral treatment was chiefly relied on in the management of this institution; at least, this appears the leading principle of action, and the happiest results are already flowing from it to this unfortunate class of sufferers, whose treatment upon the old one of cruel confinement, and even chains, has so often excited our sympathies. Dr. Stribling's judicious management, and the arrangements he has suggested for the comfort, entertainment and occupation of these unfortunate beings, are producing one among the numerous results of the reformation begun within half a century by the good Pinel. I have the annual report of the attending physician before me, but cannot at present notice it further than to extract some statistics which will prove interesting and useful:

	Males.	Females.	Total.
Old patients at the beginning of the year, -	37	35	72
Admitted since, - - - - - -	19	13	32
Whole number, - - - -	56	48	104

	Males.	Females.	Total.
Discharged during the same period, -	16	8	24
Died " " " - -	3	4	7
Eloped " " " - -	2	0	2
			33
Leaving in the Institution, - - - - - -			71

Civil Condition.

	Males.	Females.	Total.
Married, - - - - - -	11	18	29
Single, - - - - - -	38	21	59
Widowed, - - - - - -	3	6	9
Unknown, - - - - - -	4	3	7
			104

Duration of the Disease up to the present time, discharge or death.

Less than one year,	20
From one to five years,	30
From five to ten years,	19
From ten to twenty years,	27
From twenty to thirty years,	1
	104

Respective Ages of Patients.

Under 20 years,	8
Between 20 and 30 years,	25
" 30 " 40 "	33
" 40 " 50 "	24
" 50 " 60 "	10
" 60 " 70 "	3
" 70 " 80 "	1
	104

Form of the Disease.

Monomania,	11
Mania,	48
Melancholia,	28
Hypochondriasis,	7
Dementia,	9
Idiocy,	1
	104

Causes in the thirty-five last Received.

Moral Causes,	14	***Physical Causes,***	19
Domestic affliction	4	Intemperance,	4
Ungoverned temper,	1	Ill health,	8
Family troubles,	4	Puerperal,	3
Disappointed affection,	1	Epilepsy,	3
Reverse in fortune,	2	Mastubation,	1
Religious excitement,	2	Unknown,	2
Intense study,	1		

	Males.	Females.	Total.
Of recent Cases, - - - - -	13	7	20
Cured, - - - - - -	10	6	
Much improved, - - - - -	1	1	
Eloped, - - - - - -	1	0	
Died, - - - - - - -	1	0	

From these tables it will appear, that of recent cases (less than a year) from 80 to 90 per cent have been cured, and Dr. Stribling states, that of the whole number admitted since the improved system has been adopted, 43-100 have recovered. These are truly flattering results, which speak volumes in favor of the moral treatment, or a happy combination of exercise, occupation, amusement, freedom and restraint, with due attention to comfort.

But I must conclude this long letter, hoping to find something of interest to communicate to you from the western part of the State. J. A. W.

ART. II.—*A Case of Pregnancy attended by a remarkable discharge from the Uterus, followed by a safe Delivery.* By S. E. LEONARD, M. D., of New Albany, Indiana.

ABOUT the 1st of September, 1840, I was called to visit Mrs. N. in her fifth pregnancy. She supposed herself to be between the fifth and sixth months of uterogestation; but of this she was entirely uncertain, judging alone from her having quickened about the 1st of August. Her menses observed their regular periodical return until within the last six or eight weeks, as they had done during her last pregnancy, which resulted in the birth of a child at the full period. I found her discharging water from the vagina, which gushed forth copiously, unattended with pain or dilatation of the os

tincæ. I also found the neck of the uterus elongated as in the sixth month. I enjoined rest in the horizontal position, and administered an opiate. The discharge ceased in a few hours, and the next day found my patient comfortable.

September 9th. After one week's intermission, the water again began to pour from the vagina, much more copiously than during the first attack, accompanied with a sense of uneasiness, and bearing down, rather than pain, in the pelvic region. To use her own language, she "felt as if the whole contents of her abdomen would come from her." For a few days past, she had been subject to periodical returns of fever, commencing every afternoon. Bowels torpid. Gave a mercurial cathartic, after the operation of which she had no return of febrile paroxysm. A very visible diminution of the abdominal tumour had taken place, in consequence, no doubt, of the immense discharge of water from the uterus, which in the two attacks must have been several quarts. Continued the opiates after the operation of the purgative, and still enjoined the horizontal posture. The flow of water continued, with occasional intermissions, for about forty-eight hours, at the end of which time a very considerable quantity of sanguineo-purulent matter was discharged.

11th. The abdominal tumour almost entirely subsided. Says she feels plainly motions of the fœtus.

12th. I learnt from her to-day, that she increased much more rapidly in size, than she had ever done in either of her former pregnancies. In one month from the first appearance of uterine enlargement, she was as large, or larger, than ever before at the time of her accouchement.

28th. Was again called in consequence of a return of the discharge of water, which had abated for about two weeks, and learnt, that for the last twelve hours water had been

flowing from the vagina in almost a continuous stream. Patient informed me that since it last ceased, her size had remained almost stationary, until about three days since, when her size began to increase most rapidly, and, in her own language again, "she became a complete burden to herself." The discharge commenced with a sudden gush. She still feels plainly fœtal movements. Upon making an examination can readily trace circumscribed enlargement of the uterus. Os tincæ not at all dilated; distinctly felt the water flowing from it. No uterine pain. This last discharge produced great prostration, and nervous irritability. She had taken rhubarb and soda in the morning, which operated slightly. Prescribed opium, 1 gr. every four hours.

The discharge continued longer and more profusely, than in either of the preceding attacks, but again ceased entirely.

October 2d. The respite was of short duration, as she was again attacked with the flowing of water, which continued for several hours; the latter part of which time it was highly colored with blood. This, though quite profuse, had but little effect in reducing the size of the abdomen.

4th. The water, to-day, is of a deep yellow color, and she thinks much more copious than ever before. I am well satisfied that she passed more than a quart of water per diem, perhaps double the quantity, for four or five days successively; on the fourth it was intermixed with lumps of matter, of a caseous appearance, as large as a filbert. Urinary secretion almost entirely suspended, not voiding it more than once in twenty-four hours, and not exceeding two or three ounces at a time. General health better. Water from vagina still of a deep yellow color.

10th. Found my patient in great spirits, sitting in arm chair contrary to directions, and quite comfortable. The

evacuation entirely ceased, for a few hours, this morning, during which time she suffered great oppression. On the renewal of the discharge she became again quite easy, and so remained during the day. Urinary discharge continues very scanty.

12*th*. Summoned hastily, and found her much alarmed, discharging blood mixed with water most profusely from the vagina; sometimes clots of blood alone. I immediately prescribed sacch. saturini and opium, with cold applications; enjoined the horizontal position, and absolute quietude. Upon examination I found the neck of the uterus as in the seventh month of pregnancy, and satisfied myself that there was neither entire nor partial implantation of the placenta over the mouth of the uterus; as well as that the discharge was from within the chorion, and not as I sometimes suspected from immense hydatids exterior to the membranes. The membranes being ruptured, I was able distinctly to feel one of the lower extremities of a fœtus.

13*th*. Discharge of blood continues, and although very copious, has but little effect in reducing vascular action. Stomach extremely irritatable; vomiting almost incessant; complains much of acidity. Gave alkalies freely.

14*th*. Vomiting more and more distressing; great præcordial uneasiness. No abatement, but rather an increase of the discharge from the uterus of blood and water. About five o'clock, P. M., called in great haste, and found, much to my relief, that labor had fairly commenced—it being the first time during the whole period of discharge, that the uterus showed any disposition to rid itself of its contents. Found the os tincæ dilating; nates of a fœtus presenting, which was delivered, weighing about three pounds. Uterine contractions soon returned, and a second fœtus was delivered, a ver-

tex presentation, of about the same size as the first. Both lived several hours.

After labor commenced there was no discharge of either blood or water. The twins were contained in one common involucrum, and consequently there was but one placenta. Patient continued to vomit incessantly until the birth of the first child, when it ceased entirely, and she became comfortable immediately after delivery. About ten days after delivery, she voided a large quantity of purulent matter, which continued occasionally for two or three days.

In three weeks after her confinement the patient left this place for the South in good health and spirits.

November 18*th*, 1840.

ART. III.—*A Case of Traumatic Tetanus successfully Treated.* By E. F. WILSON, M. D., of Louisville, Ky.

ON the 6th of July last, about 10 o'clock, P. M., I was called in great haste to see a female named Lavinia Hoover, aged about 19, robust, and of full plethoric habit. She was reported to me as being in a fit. I supposed it to be hysterical, but immediately obeyed the summons.

On entering the room where she lay I was at once by her appearance and attitude satisfied of my error, in supposing it hysteria, and the distortion of the countenance, the wrinkled nostrils and her position, which was bent backward, induced me to suspect she was suffering under a tetanic affection. This, I was informed, was her twelfth paroxysm. On making some examination I found the iris insensible to the light; the abdominal muscles very tense, and those of the back strongly

contracted. Her breathing was rather slow, the pulse nearly natural, if any thing, slightly excited.

Appearances induced me to question her attendant closely, as to whether she knew of any injury received by the patient within a short time previously; and my suspicions were fully confirmed by the following account given to me:

Between three and four months previously, while walking barefooted, she had trodden on a part of a broken phial, and wounded the left foot, about half an inch behind the ball of the foot. The injury had been dressed at the time by a medical gentleman, who also examined it but did not discover any fragments of the glass, the patient being unwilling to allow a thorough examination. It healed pretty well, but the part always continued tender, so that in walking the patient could not put the foot flat to the ground. Her general health was very good, and she still continued moving freely about, though occasionally complaining of some uneasiness in the part. At last, about the 3d of July, she felt an unpleasant sensation in the neck extending upward, and a slight degree of stiffness in the motion of the jaw. On the 6th, she had been using much exercise in walking about, and had also been exposed to damp in washing or some household work, when in the afternoon she complained of considerable increase in the pain of the foot, and of stiffness in the neck and jaw. She was then suddenly seized with a violent spasm, or, as those around her supposed, a fit, was carried up to bed, and spasm after spasm succeeded until I was sent for.

On examination of the foot I found the wound almost entirely closed, though with still some appearances of inflammation about it. I had not at hand any instruments with which to fulfil the pressing indication; namely, the dilatation of the wound, and the searching for and removal of any fragments

of glass which I believed must be deeply imbedded there; nor had I immediately at command any of the remedies commonly relied on, in such cases, to fulfil the second indication, namely, to relax the violent and involuntary contractions of the muscles. I determined, however, in the language of Mr. Gooch, "to stand to my guns." Something must be done immediately, or the patient must probably die. I fortunately recollected that I had with me some tartar emetic.

Of this I administered about grs. xv. in two doses, not with a view of producing emesis, for in the existing condition of things I did not believe this could be effected, nor was it. I now awaited its effects. In the course of an hour the muscular contractions had almost subsided, and great prostration ensued, the extremities becoming entirely cold. For this I had prepared, meanwhile, by having mustard at hand. I now applied sinapisms to the ankles, wrists, and epigastrium, and in a short time had the satisfaction of finding reaction had commenced. No unpleasant symptoms following, I directed the following prescription to be procured and given at once:

℞. hydrarg. submur. ℈i.
pulv. opii grs. ii.,

and an emollient poultice to be applied to the foot, and renewed, and left the patient for the night.

July 7th. Found her much better—had no return of the spasms and rested tolerably well during the night; she had had two dejections from the action of the medicine; her skin was tolerably moist; pulse regular; tongue slightly furred. The poultice, however, had not been applied as I ordered. Notwithstanding this omission, I now cut down and dilated the wound, and extracted four fragments of broken glass of more than a quarter of an inch in size; again

ordered a poultice, together with some mild purgative medicine and left her.

8th. Patient still improving. No return at all of spasms; bowels open; pulse and skin pretty natural; had slept well. Ordered poultice to be continued with mild aperients. From this time she steadily improved, and on the 7th day was walking about, apparently in as good health as usual.

It appears to me, that I may attribute the prompt and complete success of the treatment to the antimony, for as soon as its action commenced, there was an immediate alleviation of all the urgent symptoms; the muscles became evidently much relaxed, and after the exhibition of the second dose, but a few minutes elapsed before there was a complete cessation of their contractions. The calomel and opium were not given until after reaction from the effects of the antimonial had taken place.

I have not met with an account of any case where a similar course has been pursued in this disease; and altough it was so successful in the present instance, I would scarcely urge a like employment of this remedy except in the last resort. Yet the impressions left on my own mind, by its effects here, are such, that were I called to another case I should be tempted to use it in the same way, in preference to almost any other remedy.

The principal objection that could be urged against it, is the danger of exciting severe inflammation in the stomach. For such an emergency the practitioner might be prepared, by having at hand the means necessary to meet and combat it.

Several months have now elapsed, and excepting a slight attack of intermittent fever, the subject of the above remarks has enjoyed uninterrupted health.

Louisville, Dec. 20th, 1840.

ART. IV.—*A Case of Congenital Deafness, relieved by an operation performed by the patient on himself.* Reported for this Journal by S. M. KNAPP, Esq., of Winchester, Illinois.

SOMETIME in the month of September, 1839, I became acquainted with the subject of this paper, Mr. John Washington, a mute, directly from the Hartford, (Conn.) Asylum, where he had been prosecuting his education for nearly seven years. Finding him very intelligent and an accomplished scholar, I took the deepest interest in him from our first acquaintance, and was particular in enquiring into his history. His father, late of the city of New York, is now a resident of Troy, Missouri, and a practising physician of some eminence. Our friend left Hartford in the spring of 1839, on account of some difficulties between him and a member of the Institution, by which he incurred the displeasure of his father, and was thereby thrown upon his own resources. During his stay at the Asylum, he had made himself master of many branches of science, and also of the Greek, Latin, French, and Italian languages; besides collecting a vast amount of general knowledge, comprising an outline of the learned professions, and much definite knowledge of the materia medica. In this exigency, cast upon the world, and yet shut up within himself, some expedient must be resorted to in order to sustain his independent position. Knowing that his misfortune would be in some measure a passport to public favor, he resolved to travel and give phrenological charts of his own making. In this he succeeded well; his sense of feeling being very acute, he was uncommonly correct. By this means he arrived at the time above named, at this place. In conversation with him upon the cause of his

deafness on our first acquaintance, he referred me to several causes defined in medical works, and from them selected the case that he supposed corresponded to his own, which is described below in his own words. By experiments I satisfied myself that the eustachian tube was unobstructed, the nerve perfectly good, and that Leschevin's mode of operation would be successful in bringing him to his hearing. Indeed, so great was my faith in the experiment, that I once promised to operate myself; but on more mature reflection I shrank from the responsibility. By the various experiments that we tried his own confidence became so strong, that he resolved to operate upon himself. An account of the procedure is thus detailed by himself:

"In 1834, while travelling in the State of New York, I became acquainted with a Quaker lady who informed me, that she was once entirely deaf and mute; and from that time to the present, I have sought with avidity for all cases where the deaf have been restored to their hearing. As several successful experiments had been made in Philadelphia, some in New York and in Baltimore, I resolved, the moment I became of age, to have the operation performed. My reason for waiting till this age was the opposition I met with from my father, who would not have the responsibility rest upon himself during my minority. I was undoubtedly deaf from my birth; my mother, however, thought I could hear until ten or eleven months old, and then grew deaf; but my father was of a different opinion; upon this point my own memory does not of course serve me. I found, by examination, that among those that were born deaf, in about five cases out of nine the auditory nerve was more or less active; most of them could hear through the eustachian tube. Many could hear the ticking of a watch when placed in the

mouth, or anything which emits a piercing, acute sound; but the best way to try the experiment is to set the watch running down quickly, and a jarring will be felt in the ear, and a stinging sensation will remain for a day or two on the tympanum, and a violent headache is generally the consequence. In many instances, however, the auditory nerve is paralyzed, and of course all attempts to restore the patient will be useless. Many cases of deafness arise from sickness, in which a collection of pus takes place in the internal ear, and in the eustachian tube. Mutes differ in many respects: in some the meatus auditorius externus is entirely closed. In my case the tympanum was covered by a preternatural membrane, which, in fact, is the most common obstruction. After trying a variety of experiments I became firmly convinced, that a simple operation would restore me to the inestimable blessing and privilege of hearing. Acting upon this conviction, I conversed with my friends upon the subject; but, with the exception of one, they all doubted its practicability, and advised me not to have it done. Shut out, as it were, from the world, and firmly believing as I did, that a simple operation would accomplish the object, I was at last resolved to "do or die;" and, after reading Leschevin's mode of operating upon a similar case, I provided myself with a common thumb lancet, ground down to about one-third of its original width, so as to admit of its entrance into a common silver pencil case, with the point protruding about a line and a half, as an instrument with which to perform the operation. About a week before the successful experiment, I made the attempt, but the pain was so excruciating that I was forced to desist. *Ad interim*, I injected daily oleum amygdalæ and black drop, to soften the parts; and used every precaution to keep my nervous system in a state of rest. After several inter-

mediate attempts to "screw my courage to the sticking point," on Monday the 10th of Febrnary, 1840, I determined upon a final effort; and after taking a common half-pint tumbler about two-thirds full of Holland gin, I went into a room by myself, and after tying a bandage round my head in order to open the lobe of the ear and confine it back close to the head, so that by casting my eyes upon a looking glass obliquely I could see the opening of the meatus auditorius, I first inserted the tube, and through it the lancet; then, summoning all my energies, I plunged it in. There seemed to be a cavity between the preternatural membrane and the membrana tympani; but I had resolved to pierce the tympanum, and so pushed the lancet firmly through. I found the resistance greater than I expected. I then turned the tube around and made another, but slighter incision, directly across the first. After drawing the lancet out, I attempted to push the tube between the lips of the incision; but the pain of the operation, together with the sudden admission of air, threw me into a series of fainting fits, or, as I was afterwards told, a number of slight spasms. Retaining the tube in the ear I had a tight bandage tied over my head, and went to bed; but amid such agony that I could not sleep. During the night there was a whirling and dizziness in my head, with explosive noises, and flashes of light before my eyes, and slight discharges of blood and yellow pus through the tube. At first, all sound was blended into one distracting tumult. In the course of twenty-four hours after the operation, the ear became more accustomed to the noise, and learned to distinguish between sounds. One fact, however, at the time struck me as remarkable; that all things were capable of giving sound by being touched, and that every thing made a noise; or, to express it as I then thought, every thing, animate and

inanimate, contained within itself latent sounds. After the operation I put myself under the care of William H. Wilson, M. D., whose account is given below.

"Thursday 13th. A peculiar itching, tingling sensation in the bottom of the meatus auditorius externus, and a feeling as if the upper part of the cranium was gone, is all that remains of pain, except that acute noises send a thrilling sensation through the head.

"A mute friend of mine in this town will doubtless undergo the operation, and I am satisfied it will prove equally successful; should such be the case, notice will be duly given. Subjoined are the remarks of Dr. Wilson:"

"In the month of September last, Mr. John Washington, a mute, came to Winchester. He called upon me at my office to consult me upon the probable success of an operation upon his ear, such as is described in Cooper's dictionary.

"On the 10th of February he told me his intention to operate himself. I opposed his project, but all argument was useless. He prepared himself, as he has described, and operated with success, and heard and articulated, with some distinctness, next morning. I was called to see him, and found him laboring under a great amount of symptomatic fever. By the use of small doses of antimony and Seidlitz powders I reduced the fever; and since that time he has been comfortable."

Having given these statements, which may be fully relied on, I proceed to describe the progress of the individual in learning oral language. The morning after the operation he signified to me that he could distinguish sounds, and I entered upon a series of experiments to satisfy myself of the fact. By directing him to fix his eyes upon the floor, I uttered shrill sounds in different parts of the room, which in every instance

arrested his attention. But I was still uncertain whether he could define sounds. To be fully satisfied, I gave him a pen, and turning my back upon him directed him to make a stroke for each word that I should speak. I then counted ten in irregular time, yet I heard the scratch of the pen in time with every enunciation. With this every doubt vanished. I then tried to make him articulate the vowel sounds. The first three he sounded very imperfectly, but enunciated *O* with a full, manly voice. I then pronounced my own name, which he spoke with some degree of distinctness. Recollecting that I had often seen him attempt to make a noise resembling his own name, by first noticing the position of the organs of speech in other persons, I pronounced it upon his ear, and to the astonishment of all, he uttered it in a full, deep, sonorous tone, that sounded like a voice from the grave. I then retired with him to a room, and continued with him six successive days. During the first day he was feverish and somewhat delirious, and troubled also with a profuse sweating on the side of the body with the ear that was punctured. Considerable debility, for several days, was the consequence; but the tone of his nervous system is now, the eighth day, nearly restored. In the course of the second day he succeeded in enunciating all the sounds of the alphabet, and in fixing in his mind all the combinations of the vowel and consonant sounds; so that by spelling words as he saw them in his mind's eye, he was able before night to form intelligible sentences. From this time onward his progress was so rapid, that I could discover a distinct progress, from hour to hour; and by the close of the fourth day, he was able to hold a metaphysical argument, and clothe his ideas in such language as to convey every shade of thought and emotion. His voice was at first hollow, rough, and sonorous, but it daily in-

creases in compass, and smoothness, and his general health is nearly restored.

Many curious circumstances attend this case, which it is not necessary perhaps to detail. One fact, however, is too interesting to be omitted. Before the operation, he could recollect the appearance of his countenance as seen in the mirror; but afterwards that statue-like aspect vanished, and every line of his face was invested with an ever-varying expression, which he in vain attempted to fix in his mind. His eyes acquired a new expression; his lips became thickened and chiselled; his temper has become subdued; and his whole bearing is changed into something characteristic and commanding.

February, 1840.

ART. V.—*A case of Peritonitis, consequent upon Bilious Fever, terminating in a copious secretion of pus into the cavity of the Abdomen.* By. A. H. BUCHANAN, M. D., of Columbia, Tennessee.

On the 10th of May, 1837, I was requested to visit a mulatto girl, aged about eight years, who had been seized forty-eight hours previously with bilious fever. About three years previously she suffered severely from scarlet fever, from the effects of which, however, she had entirely recovered, although of a delicate frame and rather feeble constitution. I found her laboring under the ordinary symptoms of bilious fever. By the use of the lancet, mercurial purges and mild febrifuge drinks, the febrile symptoms disappeared, and on the tenth day, believing her to be entirely convalescent, no further attention was given to the case. But in six days I was

again requested to visit her, and found her suffering with severe pain in the abdomen and sick stomach, which was thought by her mother to be colic. The abdomen was much distended and very tender to the touch. On inquiring into the particulars of her relapse, I came to the conclusion that this attack was produced by exposure to cold. She was bled, put into a warm bath, and ordered a dose of calomel, to be followed in six hours by castor oil; after which, a large blistering plaster was applied over the abdomen, and mucilaginous drinks directed. For two weeks her bowels were kept open by the occasional use of calomel and laxatives, with a gradual amendment of her symptoms. The tenderness and soreness of the abdomen had nearly subsided, and she was able to sit up; there was some return of appetite; but the pulse was quick and irritable, and she suffered from hectic fever, while the abdomen became more and more distended, and emaciation progressed. At this time, the end of five weeks from her first attack, she had nearly all the symptoms of ascites: the abdomen was largely distended, and fluctuation upon percussion was very perceptible; the urine was scanty and micturition painful. Believing that there was a serous effusion into the cavity of the abdomen, I put her upon the use of hydragogue cathartics for three or four days, but without the least benefit. I therefore determined to tap her, and accordingly, in the presence of Messrs. Brown and Pillow, students of medicine, and others, I introduced the trocar at the usual point in the linea alba, about two inches below the umbilicus, when, upon withdrawing the stilet, to my astonishment pus flowed through the canula, until about half a gallon was discharged. The matter had all the external appearances of pus discharged from an abscess of the cellular tissue, and had no disagreeable odour. The child

bore the operation well, and for five or six days improved in strength and spirits; but at the end of ten days the abdomen was as large as ever, and the matter pressed with great force at the point where the operation was performed, as if it would burst through. The trocar was, therefore, again introduced at the same point, and as much pus as at first was evacuated, the last ounce or two of which was thicker and of a greenish cast. The child now gradually improved in flesh and strength for eight or ten days, when the abdomen becoming again distended, it was thought advisable to let the matter discharge itself through the umbilicus where it now pointed. A poultice was ordered to be applied over the apex of the tumor, and in a few days the matter burst through at this point, and continued to discharge, more or less, for about three weeks, when the child appeared perfectly well, with the abdomen of the natural size. She has continued well, and grown rapidly, up to this date.

Observations.—When peritoneal inflammation does not terminate in resolution, the effusion of serum or of lymph is much more frequently the consequence, than that of so large an amount of purulent matter as occurred in this case. Such cases, indeed, are of very rare occurrence; although similar ones are mentioned by different writers on peritonitis. Baillie, in his Morbid Anatomy, observes, that "in some instances instead of serum a large quantity of pus is found;" and it is remarked by all pathological writers, that the effusion of pus is an occasional termination of peritonitis. M. Gase says, that he has known patients recover in whom the purulent matter escaped by the umbilicus.* M. Scoutetten also mentions a case; two cases of puerperal peritonitis which terminated in suppuration, and discharge by the umbilicus, are

* Quoted by Stokes in Cyclopedia of Prac. Med.: vol. 3. p. 294.

recorded by Gordon. Similar cases by different authors are on record; but it is remarked by Dr. Stokes that "It is doubtful when pus and lymph are effused in any great quantity, if they are ever absorbed, and such cases generally terminate fatally, or pass into the chronic form of the disease."* In the case I have related it is highly probable the disease would have terminated fatally, had not the matter been evacuated by tapping; for the child was extremely emaciated, and suffered much from hectic fever. Had I continued the use of the hydragogue cathartics the child would certainly have sunk; and had I delayed to the last the use of the instrument in the hope that the effused fluid would be absorbed, as is generally inculcated by writers on ascites, this child would most probably have perished. I consider it fortunate, therefore, that the trocar was introduced, and although I was not prepared to witness the evacuation of pus, I was immediately sensible on its appearance of an indescribable difference in the sensation produced on percussion in this case, and previous cases of ascites which I have met with. There was a greater weight, and a want of that perfect fluidity, which is present in the latter affection.

October 15, 1840.

ART. VI.—*Observations on a peculiar form of Bilious Fever.* By JOHN HARDIN, M. D., of Greensburg, Ky.

IN an essay on Congestive Fever, published in the first Number of the Louisville Journal of Medicine and Surgery, two cases were reported on account of a peculiar character-

* Stokes in Cyclopedia of Prac. Med.: vol. 3. p. 294.

istic. This peculiarity consisted in the copious evacuation from the bowels of mucus, as green as wheat, inodorous, exceedingly acid and incapable of communicating any tinge to water. Since the publication of those cases, the writer has had extensive opportunities to observe the same form of disease. The observations shall be detailed in the order in which they were made. The detail of a few cases will sufficiently develope the symptoms, course, and treatment of the disease under consideration. It will be borne in mind, that the two published cases, already referred to, were fatal in their termination; which is true of three of those that I am now about to report:

Case 1st. On the 13th day of April, 1838, I was called to the country to see Mr. D. M., æt. 23 years, of good constitution and sanguine temperament; found him with a general exaltation of the circulation, pulse quick and rather sharp than strong, tongue red and somewhat furred. Proposed v. s. to which he objected, if it could be dispensed with. Prescribed calomel, ipecacuanha and pulv. antimonialis every four hours.

15*th*. Visit repeated. Good bilious purging had been procured, and case seemed better. Prescription continued.

16*th*. Patient up; ceased to take medicine.

19*th*. Recalled; found a recurrence of first symptoms increased in intensity; prescribed calomel and ipecacuanha. For some days the case did not materially change; but after a sudden and severe alteration in the weather, which was not counteracted by a corresponding addition to the bed clothing, pneumonic symptoms were superadded. These were speedily subdued by cupping and blisters, and the case went on as before, except that there were irregular chills occurring once in three or four days. On the 25th the green mucous evacu-

ations appeared, with cool skin, small, weak, and quick pulse; intellect unimpaired. Prescribed calomel and sulph. quin. freely, with blisters to the stomach, wrists and ankles.

29*th*. Feeble reaction.

30*th*. Death closed the scene.

Case 2*d*. June 21st, 1838, I was requested to see Mrs. M., æt. about 20 years, of delicate constitution, who had, six weeks prior to this date, given birth to her second child. Symptoms; slight acceleration of the circulation, some dryness of the tongue, and constipation of the bowels. Prescription; mild cathartic pills, which gave so much relief, that the patient was up the greater part of the succeeding day.

23*d*, Recalled. Symptoms: small, weak, and frequent pulse, cool skin, dry brown tongue, pulmonary oppression. As I had not been the regular family physician, I apprized the husband of my opinion, that it would be a dangerous case, and suggested the propriety of calling an additional medical attendant. Two others were called, and for two or three days, sinapisms, blisters, calomel, quinine, carb. ammonia, seneka, and other articles were used, according to the indications of the case. The disease progressed; green mucous discharges speedily appeared; neither reaction nor secretion could be induced; two or three days after the appearance of the green mucus, gangrenous spots appeared on the gums, and under the tongue, from which there was considerable hæmorrhage. The alvine dejections continued unchanged to the death of the patient, which occurred on the 5th of July. In this case, also, the intellect continued unimpaired to the end.

Case 3d. July 19th, 1838—called to see Catharine, a servant, æt. 16 years, robust and fully grown. This girl had

waited on the lady whose case has just been detailed. Symptoms similar to those in that case, but more violent. Calomel, ipecacuan, and rhubarb were prescribed.

21*st*. Green mucous discharges; 23d, gangrenous and hæmorrhagic gums; green mucus continued to be discharged; general coldness of the surface; very small, weak, and frequent pulse; great pulmonary oppression. This was the fifth case of the same character, that I had seen, all of which had a fatal termination. I was unwilling that any more should die under the same treatment, although, *a priori*, I considered it the best that I could institute. I was satisfied that the pathology did not consist in portal congestion, or gastro-intestinal inflammation; and I recollected that in the winter 1832, '33, Professor Caldwell had suggested it as probable, that the reason why calomel did not readily excite the liver in cholera, was, that the ganglionic nerves supplying the liver were so oppressed by disease, that they did not convey to that organ its proper amount of nervous energy, and that, as a consequence, it was not susceptible to the impression of stimuli. If this pathological view was correct in cholera, and I thought it probable, the same condition might have obtained in congestive fever; and as the ganglia proceed from spinal radicles, this new view of its pathology suggested the propriety of strong stimulation to the spine, with the intention of arousing the nervous influence, and thus transmitting it to the organs requiring it. The gangrene of the mouth forbade the further use of mercurials, and under this aspect of the case, the following prescription was made: sinapisms to the whole length of the spine, and pills of rhubarb. In twelve hours there was general reaction, and in twenty-four, the alvine dejections consisted of a mixture of mucus and bile. Subsequent treatment—sinapisms re-applied

every twelve hours, and the bowels gently evacuated twice or thrice in the same time with rhubarb. Under this treatment the case slowly, though steadily, recovered.

Case 4th. Before my attendance on the last case was discontinued, Lucy, a negro woman in the same family, aged 25 years, was attacked with symptoms similar to those in it. A dose of calomel was administered, and once repeated; under the operation of the second dose, the green mucus discharges appeared. Sinapisms, as in the other case, were applied to the whole length of the spine every twelve hours, and the bowels evacuated with rhubarb. Under this treatment the patient speedily recovered.

Case 5th. Chaney, aged 12 years, a servant girl, belonging to the same family, being similarly attacked, a dose of calomel was administered which produced green mucus discharges, and dry, black gums. Sinapisms and rhubarb were used, as before, with the happiest consequences—the improvement was perceptible in twelve hours, and continued steadily to perfect recovery.

Case 6th. September 1st, 1838, I was requested to visit a youth, aged 12 or 13 years, of good constitution, who had been sick some twelve days. Symptoms—expressed himself as being free from pain; tongue dark red and very dry; skin rather hot; pulse too frequent and sufficiently full; restlessness very considerable. He had been in a similar condition to that just stated, from the commencement of the attack; had taken 25 grs. calomel every night, with rhubarb on the following morning, when the calomel failed to operate. Discharges represented as having been consistent and bilious from the beginning. The same treatment was continued for one night longer.

Sept. 3d. Gangrene of the gums apparent; surface cool;

pulse small, weak and frequent; alvine evacuations represented as being still consistent and bilious; but upon inspection were found to be a dark green mucus. Spinal irritation with mustard seed was used every twelve hours, and the bowels moved with rhubarb. Under this treatment the patient recovered, but was considerably endangered for some days by gangrene and hæmorrhage of the gums.

Case 7th. September 8th, 1838, was requested to consult in the case of a child aged 3 years, who had been sick fourteen days; disease supposed to be worms; between twelve and twenty doses of calomel had been given, and pink root in proportion. Present symptoms—cool surface; small, weak and frequent pulse; green mucous discharges; gangrene and ulceration of the gums, and of superior maxillary bone, beginning at the incisores, and extending backward along the palate bones, denuding them in their course, nearly to the velum pendulum palati. Treatment.—Sinapisms to the spine, with calcined magnesia and charcoal every two hours; sulph. cupri to the ulcers. The effect of this treatment was almost magical. In twenty-four hours the discharges were healthy; appetite good; reaction perfect, and every vestige of disease removed, except the gangrene of the mouth. This unfortunately continued, removing several teeth, destroying the upper lip and nose, and extending (before death, which did not occur for nearly three weeks,) to the forehead. During the greater part of this time, the general strength improved: the appetite was excellent, and the evacuations were natural.

Since the occurrence of the above cases, it has fallen to the lot of the writer to witness a vast number of others bearing a strong family likeness to them, but presenting great varieties in some of their features. The years of 1839 and 1840 have ben remarkably prolific in such forms of disease,

investing nearly all febrile affections with their liveries. In the cases narrated no regular, nor indeed irregular, remissions were observed; whereas, in the years 1839 and 1840, the chief part might with great propriety be denominated congestive remitting fever, and almost every medical practitioner in southern Kentucky, would under that term recognize their unwelcome annual visitant.

It is not my purpose to go into a formal detail of any other cases, but merely to give a succinct synopsis of my observations on the pathology and treatment of them.

My investigations have led me to the following conclusions, viz; that the disease consists, first in an oppression of the nervous system, and, as an unavoidable consequence, the equilibrium in the circulation is destroyed; that either of the above conditions is most certainly productive of diminished or arrested secretion, and great visceral congestions, which are very prone to run into sluggish inflammations and gangrene; that the green mucous discharges observed are not "*green gelatinous bile*", but a vitiated acid secretion from the intestinal mucous membrane, which results in ulceration; and that the predisposition in this form of fever to vitiated acid secretion is excited, and kept in destructive activity, by mercurials.

In all cases of ordinary violence, the respiration is very laborious, being performed, in a great measure, by the elevation of the shoulders, and failing to reach the bottom of the lungs, which renders it nescessary, every few minutes, to make a deep inspiration. During this state of the respiratory apparatus, there is an almost intolerable sensation of weight at the epigastrium, with feeble radial pulsation, and cool surface, especially of the extremities. In this condition, I have endeavoured to arouse and equalize the circulation by the

application of sinapisms, together with warm rocks to the extremities, without making the slightest impression, or producing the least redness under the mustard plasters. In the same cases and conditions, I have applied the counter-irritant to the whole length of the spine, and invariably with the most marked advantage. It has always aroused the circulation, warmed the extremities, removed the epigastric oppression, and often induced a warm, pleasant diaphoresis. In these cases, the tongue is often dry, brown in the centre, and fiery around the edges; the stomach is intolerant of pressure, and the whole group of symptoms forbids the internal exhibition of stimulants.

I have seen several cases where instead of mustard seed, blisters were applied to the spine, and with good results; but I prefer the mustard, because the intensity of its effects can be increased or mitigated at pleasure; and therefore the spinal cord does not become so accustomed to its stimulation as it does to that of a more permanent counter-irritant; and also because it is exceedingly difficult, not to say impossible, to confine the necessary dressings to a blistered spine.

I have said that a great number of these cases have remissions, and I may add that they are more difficult to manage on account of these remissions. A case may have existed and been under treatment for several days, or a week, and may seem to be doing well, when suddenly the voice will sink and become a husky whisper; the end of the nose and sometimes the extremities of the fingers and toes become cool, while the rest of the body evinces preternatural heat; the patient complains of a sensation of sinking, with alternations of hot flashes and slight rigors. This condition not unfrequently continues for four or six hours with great intensity, and it may require twenty four or thirty six hours for reaction to be as well es-

tablished as before the paroxysm. In a few cases death takes place in the first paroxysm; and if not arrested would usually do so in the second or third.

How are these paroxysms to be prevented? This is a question of great difficulty. The dry, reddish brown tongue, the great epigastric tenderness and heat, have always seemed to me plainly to contra-indicate the use of sulphate of quinine; and yet a recurrence of the paroxysm must be obviated, or death is inevitable. Under these circumstances I have given, several hours before the accession of the coolness was anticipated, 10 gr. pulv. Doveri, 5 gr. camphor, with a cup of hot sage or horsemint tea, and applied sinapisms to the spine and extremities, together with warm rocks to the hands and feet; and this practice has not disappointed me. It has uniformly produced the intended effect. I have not depended on spinal irritation alone to arrest these paroxysms, because the danger is so imminent, that I have felt disposed to employ every adjuvant within my reach. After arresting it once, the same means to a less extent should be subsequently used as the period of recurrence approaches.

January, 1841.

REVIEWS.

ART. VII.—*Outlines of the Institutes of Medicine; founded on the Philosophy of the Human Economy, in health and disease. In three parts.*

"Should we build facts upon facts, until our pile reached the heavens, they would tumble in pieces, unless they were cemented by principles.—RUSH."

By JOSEPH A. GALLUP, M. D.—*Author of sketches of epidemic Diseases in the State of Vermont*; late Professor of Theory and Practice in the Vermont Academy of Medicine, and of the Clinical school of Medicine; Ex-President of the Vermont Medical Society; Hon. Member of the Medical Society of the State of New York, &c. Boston: Otis, Boarders & Co. 1839.

SHOULD any of our readers allege to us that this title-page presents an aspect somewhat out-of-the-way and uncommon, we should hardly be so uncivil as to contradict them. Instead of thus unceremoniously plunging into collision with them at first sight, in either thought or feeling, we should be more likely perhaps to reply, "*so much the better.*" We like consistency and aptitude; and on that principle, this uncommon title-page very fitly ushers to the world a brace of "uncommon" volumes. For such is the character of the work before us.

We have not however yet said, nor do we indeed design

to say, whether it is uncommonly *good*, or uncommonly *bad*—or whether it is either the one or the other. We insist only that it is uncommon. On the score of its quality, our readers may, at pleasure, decide for themselves, by aid of the means to that effect, with which we shall furnish them; or, better still, by *purchasing* the books, as we have done, and reading them *verbatim*, from first to last.

The production before us, we repeat the third or fourth time, is uncommon; and the following are some of the particulars which make it so. It manifests in its author an uncommon amount and accuracy of reading, remembering, and recording, and uncommon earnestness in thinking, and in his propensity for theorizing. *His* thoughts and theories however are not always *ours*. But that matters not; they may be better than ours; and we shall not therefore condemn either them, or him on account of them, nor even find fault with them. Let their trial be held at the tribunal of the public—and fairness and justice will there be awarded them.

The work is farther uncommon on account of its old-fashioned elaborateness and formality—the number and brevity of its "Sections" and subdivisions, furnishing the reader with all possible convenience on the score of stopping, breathing, and reflecting places,—its abundant and perhaps unnecessary employment of certain words already existing, but almost out of use, and of its ready coinage of new ones, (the author proclaiming the entire insufficiency of the present meagre nomenclature of medicine to answer the demand of *improvement* and *discovery*)—and its rich store of facts, many of them sufficiently interesting and useful, and of opinions and notions not quite so valuable. To these may be added an uncommon proneness in the Doctor to the labour of "*definition*", in which complete success is never attained by mortals, (the faculty and

language of definition, according to an ancient sage, "*belonging only to the gods*") and an effort at uncommon precision in all things. Nor shall we charge the effort with fault or failure, except in the article of style, which we cannot admit to be, in every instance, either precise or classical, perspicuous or chaste. Yet it is generally intelligible; and we have reason to believe that our author has laboured it as sedulously and intensely, and esteems it himself at least as highly, as any other attribute of his books.

Such are a few of the grounds (and many more might be adduced) on which we have pronounced the "Outlines" uncommon; but have not on that account either praised them or blamed them. And we shall only add, under the present head of our remarks, that although every uncommonness, in science or letters, does not necessarily imply improvement or discovery; yet the reverse is not true. Every discovery and improvement must have something uncommon in it, else it would be in no shape an amendment.

But from the uncommon we must pass to the common and general qualities of the "Outlines", by which our readers will be much better enabled to judge of their merit. To speak more definitely on the subject; we shall now give a brief view of the plan which our author has pursued in writing them, followed by a few extracts from them, a careful perusal of which, next to a perusal of the entire production, will furnish our readers with the best means of working out a correct decision respecting their character.

Covering by it as he does, the entire ground of the Institutes or Philosophy of Medicine, our author has thrown his work into three grand "Divisions"; those of Physiology, Pathology, and Therapeutics; and in his treatment of each branch he has incorporated not only the result of his own ob-

servation, and reflection, but also much that he has derived from a long-continued and toilsome examination of the productions of many of the most distinguished medical writers of all countries, and of former times, as well as of the present. The amount of matter therefore, which he has amassed in his publication, into whatever shape his taste and fancy may have led him to mould it, or whatever covering of unusual and fresh-coined words he may have thrown around it, can hardly fail to be ample and useful. To convince the reader that Dr. Gallup knows how to begin his fabric at the beginning, and construct it from the foundation *upward*, as the case requires, instead of following the example of some who build from the roof downward, we submit to his inspection the following extract, under the several heads or subdivisions of "Ultimate Composition", "Organic Composition," and a few others.

Ultimate Composition.

"The process of destructive analysis of animal bodies exhibits various substances; such as phosphorus, the phosphate of lime, soda, magnesia, potash, manganese, sulphur, chlorine, iron, carbon, silex, alumine, and several neutral salts in small proportion. However, the phosphate of lime is very abundant, entering into the composition of the bones and giving them their solidity."

"By analysis of the body, either spontaneously or by art, are found the following gaseous substances, making parts of the constituent elements; oxygen, hydrogen, and azote, which may be confined. There are also, certain evanescent essences, in the living state, not confinable; as caloric, light, electric fluids, various gases, and the principle of *vitality*. These have more or less feeble combination with living organic bodies, and become evanescent before decomposition takes place. The principal elementary ingredients, which compose all the soft part in animal substances, are carbon, oxygen, hydrogen, and azote, in different proportions in the different organized elements; phosphorus and lime are the basis of the hard parts. Azote exists in the largest proportion."

"Chemico-physiological researches indicate many other substances in the human body, which some think have been constituents; yet they rather ought to be esteemed products, or secondary formations of vital organic influences. Many acids are found, as the sulphuric, carbonic, benzoic, uric, amniotic, oxalic, formic, acetic, malic, lactic, and rosacic, which last is found in lateritious sediment of the urine in fevers."

"*Organic Composition.*"*

"Upon a cursory inspection of the human body, it is found to give a moderate resistance to the touch; to be composed of what may be styled plates, or animal membranes of different degrees of compactness, and pierced in all directions by apertures of very different calibres; these constitute the *solids*. Within these openings or tubes, are discovered liquids, either red or white, which pass in different directions through the solid parts; these are called the *fluids*. It would appear at first view, that the solids exceed the fluids by weight; but, it is found on desiccating the body, that the fluids exceed the solids as about nine to one. However, they are quite different in different subjects.

"The diffuse, invisible, actuating principle of animal bodies has its residence in both these solid and fluid substances, but is most eminently appreciable in the former. However, the fluids sustain an important office in the economy of the system, and bear around in their circuits the rich fluid animal matter that becomes attached to the solids to increase their growth, or supply their waste.

It appears to be ascertained at the present time, that there are at least four primary animal formations, which by coalescing in various proportions, constitute the organization of animal bodies ;—these are *gelatin*, *albumen*, *fibrin*, and *mucus*; and some old *ozmazome*. These being vitally anima-

*The author wishes here to advise the reader, that his course in this arduous undertaking is intended to be a straight forward one; he cannot stop, *on ordinary occasions*, to give credit to various writers who may have richly contributed to improve the science of Medicine; and indeed, he scarcely feels able, in numerous particulars, to designate, whether the deductions he may advance have been formed by himself, or derived from others. Neither can he often stop to refute what he may suppose to be erroneous conclusions of others, and thereby interlard the work with contraries; but will endeavor to be satisfied, if he can arrange, and express his views in a manner to be rightly understood throughout the work.

lized molecules themselves, unite by a sort of peculiar formative affinity in the production of lines, or fibres; and in their turn these lines unite, by various crossings and interlacings, in the formation of tissues, or membranes. Again, these last, by a sort of plastic, formative impetus, generate what are called organs. If the process is not so formed as first to form lines as suggested, they are found in such a state, although the parts may have been formed in tissues by a gradual accretion, or elongation. Each of these primary animal elements merits some farther consideration.

"*Gelatin.*

"All the four animal constituent molecules before mentioned, are composed of carbon, hydrogen, oxygen, and azote, but in different proportions. Some physiologists have said, that gelatin does not possess any azote in its composition. But it seems now proved that it does, but not to the amount contained in fibrin. It is contended by some also, that gelatin is not found in the circulating mass of blood; however, this is shown to be a mistake, but it is found only in a small proportion.* The muscles, it appears, are first formed in the embryo, of gelatin, and afterwards recieve an addition of azote, by which they are converted into fibrin, which renders them more capable of contractility.

"Gelatin, or jelly, is extracted by boiling, from the tendons, bones, capsules of the joints, dura mater, cellular tissue, and all those membranes called by M. Pinel the fibrous membranes, of all which it is their principal constituent. They are called *fibrous* on account of their filamentary appearances. All these tissues seem to be formed by a condensed and modified state of the laminated or cellular tissue, for this is almost wholly formed of gelatin.

"It is represented by many experimenters, who have minutely investigated the subject, that the molecules of gelatin are not so large as those of fibrin. The tissues of which it is a principal constituent, possess a contractile property, but not so much so as tissues formed of either albumen, or of fibrin. It is probable, however, further observation may be required in order to be satisfied, whether gelatin or albumen possesses the most contractility. That all the tissues are endowed with more or less contractility is very manifest, otherwise they could not aid in the organic functions.

*Berzelius.

"The physical proporties of gelatin are; 1st. It is soluble in water, but not in alcohol. 2d. It liquifies by heat, whilst albumen hardens by heat. 3d. It can be made solid by cold, and drying, but readily putrifies with water. 4th. It may be again liquified by heat, whilst albumen cannot be restored when once coagulated. 5th. It has a chemical affinity with tannin, and unites with it, by which union it becomes unliquifiable and insoluble. 6th. Uniting with tannin from the bark of astringent vegetables, in the skin of animals, it converts them into a dense, elastic state called leather.

"*Albumen.*

"This constituent of animal matter, receives it name from the albumen of the white of eggs, to which it is very similar. M. Cloquet says, it always contains sulphur, and subcarbonate of soda, besides the common elementary constituents. When in a fluid state it coagulates at about 165° of Fah. Alcohol, the acids, muriate of mercury, astringents, &c., coagulate it. Subjected to the process of drying, after being coagulated, it forms a solid semi-transparent substance resembling horn, insoluble except sparingly by alkalies.

"This substance is very abundant in nature, as it enters into the composition of both animal and vegetable bodies. In the human system it is found abounding in the serum of the blood, in the humours of the eye, and most of the secretions, particularly in the milk; and, also, in the white tissues. It is esteemed to be a principal constituent of the nervous pulp, throughout the brain and nerves; also of the glandular textures. It is easily extracted from other substances in combination, and its most delicate test is a solution of muriate of mercury.

"It exists abundantly in the seeds of vegetables, as well as in their roots, stalks, and leaves, It is, likewise, an important constituent of most of the tribes of insects, reptiles, and crustaceous animals, as well as the infusoria. As it is readily decomposed when subjected to warmth and moisture, it affords various volatile substances in the form of effluvia, more or less disagreeable, if not obnoxious. Old animals have in their composition the most albumen, whilst young ones possess the most gelatin. Seguin has shown it to be the most essential principle in the production of spontaneous fermentation of vegetable substances, thereby evolving saccharine, alcoholic, and acetic products. This substance is of much use in clarifying liquids; and, also, by inviscating poisonous

substances in the stomach, may disarm them of their deleterious influences."

The following is our author's somewhat curious, though not *original* speculation, respecting the *primitive formation* of living organized beings. Nor is it designed by him to contravene or question the Mosaic account of the process. It is only intended as a comment on that account, referring to it as authority, and offering an exposition of it.

"This power, this property, may hence continue to be known by the appellations of vital principle, vital force, vital energy, or simple animation, or life. Its peculiar influences in the human system may hereafter receive much amplification.

"*Its Origin and Source.*

If it should be inquired, from whence originated this principle;—it might be answered by retorting this inquiry, whence originated light, affinity, gravity, and other properties and essences in nature? That creative Power who said, "Let there be light and there was light," said also, "Let us make man in our own image,"—"and breathed into his nostrils the breath of life, and man became a living soul."* If the *breath* used in the narration should be considered a figurative expression, yet an influence must have been diffused into the inanimate body; and not only so, but coeval, and coextensive with the existence of matter, that all the other tribes of creation, both animal and vegetable, assumed portions of it necessary for their own individual economy.

"If the pride of modern philosophy will not admit of proofs, or direct allusions from the record of inspiration, it is hoped it will stoop so low as to admit it in collateral support of a thesis partially founded on analogical facts. The pride of philosophy must be truly humbled in the view, that no greater advances have been made in the science of life since the creation of man, and of a subject constantly presented to the senses, and to the understanding also.

*Genesis ii. 7.

"*Illustrations.*

"It has been intimated, that this emanation of vitality is coextensive with the other properties of matter fixed on the surface of the earth, or floating in the air. It may be expedient to continue the illustration some farther. In the first place, a direct seminal influence, and sequal fecundation can scarcely account for all the phenomena of vitality noticed on the surface of the earth. Without being obliged to go into specification of much extent at this time, it may be remarked, as sufficiently proved by the investigation of geology, that various species of vegetables have been found in the transition, and after formations of the crust of the earth, which have become extinct. Again, others now vegetating are of modern origin. So of animals; natural history furnishes evidence of species, and genera of animals that have become extinct, and others have somehow sprung into existence; and surely, as far as can be discovered, without a direct seminal origin. Where are the giants of old? Here and there a petrified skeleton is found deep in the earth; and also, many unknown animals of huge dimensions, besides the mammoths, the tapirs, and hippopotami.

"We can form no conception of a seminal origin of the myriads of myriads of ephemeral insects that darken the air, or of reptiles which separate the foot of man from the surface of the earth. All springing into life at the same time, and simultaneously giving up the ghost, and becoming extinct. They appear again at uncertain intervals, and often having some slight modifications. A volume might be filled with facts on this subject; and indeed volumes have been.

"Stagnant waters imbued with some portions of albumen, gelatin, or fibrin, and probably other congenial animal substances, and when exposed to a high atmospheric temperature, soon become loaded with innumerable animacula of different genera and species, often visible, and often seen by the microscope. Neither caloric, nor oxygen, nor water combined, can produce organic beings, without a vivifying principle besides them, and then they act as auxiliaries."

"*Universal Generant Influence.*

"It is believed that those who have advocated the thesis styled spontaneous generation, have not gone so far as to designate very minutely the prolific principle, nor the substances it acts on. They commonly illustrate it by a rehearsal of

facts. It seems expedient, therefore, to follow up the subject a little further, without intending to exhaust it.

"In the first place let it be understood, that whatever scriptural allusions are made, it is not intended they should be received as strict philosophical evidence, but as collateral facts to aid the illustration of difficult subjects. We find then, that in the beginning, "the Spirit of God moved upon the face of the waters."* Let it only be noticed here, that the earth, and air both contain water. At this time, "the earth was without form." We will hardly dare to affirm, but have reason to presume, that a vital principle was at this time diffused in water, earth, and air. For we are immediately informed of the command, "and God said, let the earth bring forth grass, the herb yielding seed, and fruit tree yielding fruit after his kind, whose seed is in itself upon the earth; and it was so."† There is no mention of *seed* from which the herb germinated, but *yielding seed*, which was in the herb.

The phraseology, *whose seed is in itself*, may justly be understood as an influence imparted, and of a general kind, to the terrestrial elements, by the same Spirit which gave all the other properties to matter. The same breath which set these elements in motion, and determined the circuits of the heavenly bodies, also bestowed a principle of organic vitality, which is coeval with other properties of matter, and will be alike, or more enduring. It is as identical in its character as any other of the properties of matter, and none so fully displays the matchless beneficence of its Author. If the Pentateuch be admitted as a rule of faith in relation to divine subjects, why not in some degree respected in relation to subordinated correlative facts?

"Again, the same Creative Power, said, "Let the waters bring forth abundantly the moving creature that hath life, and fowl," &c. Also, "Let the earth bring forth the living creature after his kind, cattle, and creeping thing, "&c., and it appears that "God blessed them, saying, be fruitful, and multiply." There is no intimation of there being either in the vegetables or animals any seed from which they took root in the beginning, but the vegetables yielding seed for the nutriment of man, and the green herb for the use of animals; and both were apparently brought forth in a spontaneous manner. Although the seeds of vegetables were secondary in formation, and made for the use of animals, yet they do, for the most part, contain germinating points, like cuttings, from

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* Genesis i. 2. † Genesis i. 11, and onward.

which other series in succession are propagated. Admitting all that can be said in favor of a seminal propagation, it is no proof against a spontaneous origin of both vegetables and animals, under particular circumstances."

To give a farther illustration of our author's physiological creed, we deem it right to quote a few clauses, containing his views of what he calls the "*suction power of the heart.*"

"6. *Cardiac Vacuum.*

"Some notices have already been made in relation to the suction power of the heart, and on capillary attraction. By way of recapitulation, we may remark, that they imply too much of mechanical principles to be in accordance with all other vital movements. The cavæ serve as reservoirs of blood in a limited manner, and suffer an undulatory motion as the right auricle contracts and dilates; the blood rushes into the auricle and ventricle as they dilate; and we freely admit that the heart is endowed with an expansive power. By this mechanism a suction force does exist, and is extended so far as the large veins extend without valves. But, it is contrary to all analogy, and all the laws of physics and of vitality, to infer, that any suction power of the heart, assisted by atmospheric pressure, can cause fluids to be absorbed by the mucous tissue of the internal viscera, or by the serous tissues. These circulations, in the capillary systems, continue for more than twenty-four hours after a cessation of the heart, and respiration. So the sap in vegetables ascends only so long as they retain any portion of vitality. The veins fill, and become largely distended when ligatures are applied to them. Furthermore, capillary circulation can be expedited in numerous ways, without any agency of the heart. The absorbents take up congenial fluids, whilst mechanical suction might take up all fluid substances indiscriminately. Finally, there is as much evidence of a vital capillary action, as there is of such an agency in the heart itself.

"Admitting, then, a limited degree of suction force by the active diastole of the heart, as influencing the circulation in the large veins without valves, and which are surrounded by an osseous encasement, we may admit another mechanical force, which has some influence on the same extent of circulation. This has reference to the process of the expansion of

the thorax in the act of inspiration. The air rushes to fill the vacuum in the lungs, and a suction point is established in the whole thoracic cavity, and more space is given for the circulation generally. The jugular veins are seen to discharge their blood in the act of inspiration, and become turgid in expiration. The circulation through the lungs, also, is promoted by the dilatation of the chest, with the expanion of the vesicular tissues:—hence the panting exertions in forced respiration. Surely, in the fœtal life, the blood circulates without this force of thoracic dilatation, or any suction power, for there is a circulation before the heart is formed."

With the following descant Dr. Gallup introduces his Division of Pathology, which, to say the least of it, is sufficiently bold, uncompromising and independent. And, in these conforming, truckling, and popularity-seeking times, those qualities are meritorious and praiseworthy.

"SECTION XIII.

"1. *Preliminary Remarks.*

"Our illustrations will be conducted on the broad basis of investigation of the causes of disease, *Etiology;* the phenomena, *Semeiotice;* and the character of the morbid habit generally; or more strictly *Pathology.*

"The philosophy of medicine in all its relations, is of a peculiar character, and identical in its kind. It is in subordination to a force never found in purely physical matter; but amenable to a power which presides over organized substances, and influences their movements; alike persistive in the disturbed conditions of disease, as in the placid trains of the phenomena of health. This controlling influence is subject to various modifications from changes made in the organism by exterior circumstances, and the transition is often too easy from the normal to the disturbed state.

"The phenomena of disease are so far more intense than those of health, that the sufferer, and peradventure the medical attendant, when ignorant of the structure and functions of the organism, may be led to suppose that some additional *entity* is thrust in, and that he has new forms and sensibilities within the body, which never before existed there. The natural conclusion will be that these must be removed; and

nearly the whole materia medica may be tried empirically for this purpose, and yet the suffering may still continue. This is only one of the many false views of the character of disease.

"Neither does a certain assemblage of *symptoms* constitute disease. These are only the indicators of perturbed action going on in the tissues. They speak in legible terms to those who can read, and understand the language of physical impulses on vital tissues, and organs; and the responding motions excited, and displayed by an union of apparatuses, now show a discordance, which at other times were progressing in harmony. We cannot accord with the purblind views of those who say "all physiology as far as it is hitherto known, is totally or nearly useless in explaining any thing which happens in fever." "In short, fever is a disease, the whole of the appearances of which have been in no ways accounted for."* Discouraging indeed for the long labors of the amphitheatre, and the tortures of vivisections.

"Numerous have been the false views of disease, and often so entertained by whole communities, as well as individuals. Opinion has been marshalled against opinion, and of course the treatment has been as opposite as the antipodes. Public confidence has been impaired, and even personal opinion distrusted after tedious rounds of practical experience. Medical sentiments have often been neutralized, and of course made inert; or all theorizing has been abandoned, and the mutable symptoms of disease followed up as disease itself, with a blind zeal, when they are but the mere indices of their prototypes, or the injury inflicted on the organization.

"In consequence of these jarring sentiments, a well grounded assurance in the treatment of disease has been weakened; the way opened for the entrance of impostures, and the science of medicine stigmatized as uncertain, visionary, and conjectural. Poor recompense indeed, for the labor and zeal of ages bestowed on that art, which Hippocrates esteemed divine, and which was designed to relieve the distress of man, and prolong his existence.

"Such views ought no longer to be tolerated by men of enlarged information, and who are in possession of the immense store of facts elicited by modern improvements, in all the collateral branches of medicine. These are materials for forming a new generalization of the principles of medical science; and there is the more need of this, since nothing

* Fordyce on Fever, pp. 18 and 20.

efficient has been attempted for a long time past, and the labor and responsibility is so imposing, that it has been rather evaded by many most capable of undertaking the task.

"In the outset we indignantly repel the trite, sarcastic innendos, which have so often uncourteously been cast by many; by direct allusions to theorems advanced, having been formed from lamp-light cogitations in the closet; and the bending of facts and analogies to support a favorite hypothesis. We have been inducted by another, and more hardy routine of study. And from the full conviction of the insufficiency of every generalization hitherto attempted, have reexplored, the chartless empire of medicine; and wishing to save it from the quicksand of empiricism, have made many comparisons in the open air, in the dissecting room, and at the "bed-side of the sick." Having a few incontrovertible data, as polar stars in view, we have *endeavored* to form inductions, which will not readily be dissipated by the fire of experiment. If the arrangement is new, it is supported by facts not altogether novel.

"If we are not able on all occasions to offer a satisfactory explanation of every phenomenon of disease; yet, it is posible the outlines of a system may be designated, which if it be not perfect, still may not be false."

In his "Etiology or Pathogeny," as he himself terms it—in plain English in his views of the CAUSES of disease, our author maintains some singular notions. Of these we have a specimen sufficiently striking, in confirmation of our statement, in "Section XXV," subdivisions.

"1*st. On the general atmospheric Pestilential Afflatus.*

"REMARKS.

The history of diseases from the remotest period, even down to the present time, affords sufficient evidence of the prevalence of severe diseases at particular seasons, and far exceeding the ordinary amount. These periods continue sometimes several years, involving different countries and latitudes, or their inhabitants, more or less, in severe calamities. In some cities nearly half the population has been swept off in a short time, by one form of disease, whilst an-

other modification, under some other name, rages in another district with nearly equal severity; the loss may be one in ten, or one in three of the inhabitants. Man knows not where to flee for safety; nor can he escape its presence; for as the poet has expressed it, "a secret venom oft corrupts the air, the water, and the land.

"*Its Extensiveness and Effects.*

"There have been seasons when the vegetable productions were blighted with mildews by some secret taint; and although luxuriant, yielded but little fruit for the sustenance of man; when likewise, the beasts of the earth, and fishes of the sea sickened and died. At the same time, or in quick succession, an invisible something seizes on the bodies of men; they also sicken and are laid prostrate, and whole communities are filled with dismay. The picture is well portrayed by our medical poet Dr. J. Armstrong, and ought to be preserved.

'Of every hope deprived,
Fatigued with vain resources, and subdued
With woes resistless, and enfeebling fear;
Passive they sunk beneath the mighty blow.
Nothing but lamentable sounds were heard,
Nor aught was seen but ghastly views of death.'

"*Ingenerate Origin.*

"The question has arisen among Philosophers, what is the medium that sustains this noxious agent, and from whence did it arise? There are some facts, and much analogy in favor of its aerial existence; and this was the sentiment of the most ancient, as well as modern pathologist. But from whence it came, and what its entity consisted of, has been a subject of speculation and hypothesis; it has escaped every scrutiny, and every test. It received different appellations as the writer's modified views of its character dictated. Hippocrates called it *to thion*, or divine essence. Diemerbroeck styled it *pestilential germ*. Sydenham referred it to certain *occult qualities* in the atmosphere; whilst Rush and others, denominated it an *inflammatory* constitution of the air. The Arabs in allusion to the same thing as producing the cholera, call it *El Hawa*, the wind, or blast that passes. Or it may be styled a *pestilent afflatus*.

"We will chiefly contend for the fact, that certain periods, embracing from three to ten years, or more, occasionally occur, in which destructive diseases prevail, and that there exists the strongest presumption of a wide spread contaminating influence in the common air, affecting the fluids, and vital susceptibility of all organized compositions, more or less; but, from what physical influences it arises, is yet a matter of conjecture. We know not much more, or different from the allusion of the Psalmist, when he spoke of "the pestilence that walketh in darkness, and the destruction that wasteth at noon day." Dr. N. Webster has compiled a very useful epitome of medical history, in which he endeavors to establish a coincidence, and dependence of pestilent diseases on planetary influences, in connection with the agency of electricity. On a former occasion,* we were inclined to advocate the thesis; but on further reflection have grown more sceptical. From whatever source it may have an origin, it must be very extensive, as it embraces a wide range of aerial surface.

"In Section vi. 5, a suggestion was made, with a view of exciting further inquiry, that an excess of vegetative life pervading the atmosphere might, by undue stimulation, affect organized beings. On the thesis of an all prevading vital aura, Sect. vi. 6, this suggestion is raised; and on the facts, that during the pestilent periods, and in districts suffering most, there is an excess of vegetative and animal life; that myriads of insects and reptiles appear; that the intellects of men are elevated, even to a degree of impassioned ardor, and often attended with broils and wars; that the procreative powers are increased; and finally, that the entire organism shows signs of a more than ordinary state of excitation.† The effect has commonly been assigned to the cause, in the hypothesis of decaying vegetables, and putrifying animals contaminating the air; whereas it is far from probable, that the same cause, which affords an undue increase of vegetable and animal life, may stimulate the living system to excess of action, and excite disease in some form. However, there is a great weight of testimony to show, that the decomposition of vegetables or animals does not excite disease, notwithstanding so much has been advanced on the hypothesis. Sickness often follows great scarcity of vegetation and; again a luxuriance accompanies, and follows severe epidemic diseases.

*Sketches of Epidemic Diseases in the State of Vermont.

†See Tytler on the Plague.

"A considerable number of facts are put together by Professor Chapman, in an essay on the causes, &c. of epidemics; *Phil. Jour. Med. Sciences, No.* 18; which go to show very satisfactorily, that the effluvia of decomposing animal bodies do not produce disease, and nothing more than sometimes a temporary commotion. In the same work also, many facts are stated, showing an increase, and decay of numerous animals, of the lower classes, in seasons of devastating sickness. We may remark, that shallow waters have much albumen, and are filled with various kinds of vermin. He also makes this pertinent remark, in a casual manner; "It seems to me a much more rational conclusion; that this unusual fecundity is owing to the state of things of which epidemics are the effect." And further mentions the fact as occurring in yellow fever, of "the black vomit being found, during the life of the patient, so filled with animalcula as essentially to constitute that fluid." For a still more extensive collection of facts on these interesting topics, Dr. Webster's valuable work on pestilence, may be consulted with great advantage.

"We shall not urge this subject at present; but, if it be true, that there is an all prevailing vital aura, which sustains the immensity of organized beings, (Sect. iv. 6,) we may by analogy assent to the suggestion of conditions of excess, or certain concentrations like galvanism, and the manegtic aura; and in such an event, it may no doubt spur to excess the living tissues, producing disease; and, also, cause the ocean, earth, and air to teem with life prolific, bringing into existence myriads of ephemera to flutter in the sunbeams, and stay just long enough to declare their Maker's power."

Under the same general head we have a further exemplification of these speculations, in subdivision

"6. *Remarks on the late Cholera Afflatus.*

"A brief review of the late epidemic may afford some instruction on aerial influences, as it seems to be the most extensive, persistive, and destructive of any on record. It first appeared in Asia, and extensively in the region of the Gangetic Delta, in 1817; a country where it had for ages been known to be epidemic. It appears now to have arisen with some new modifications of severity, and as if its source was inexhaustible. Our geographical allusions are intended more

for atmospheric than for terrestrial boundaries. Reference may be had to various official reports from India of its extent and ravages. We can only remark that it passed in all directions, but its principal line of march was from east to west. Its devastations have reached from 20 degrees south latitude from the equator, to 65 degrees of north latitude, and more than 100 degrees of longitude, before making its transit over the Atlantic ocean.

"The particular routes of this destroyer of life have been quite irregular, but it progressed on an average about three or four miles a day westwardly. It has stopped and retrograded in its course; escaping some villages, whilst it revisted other cities, and at an unexpected time suddenly seizing on the favored ones; this is common to other epidemics. Its stay at different places was quite various, sometimes a few months, at others only a few weeks; yet hovering about, and occasionally becoming more aggravated. It loitered several years near the confines of Europe, and at length, as if it had gathered strength, in 1829 entered, visiting even the cold regions of Russia in summer and winter. In 1830 it reached England, Scotland, and made solemn progress in the south of all Europe. Before it bestrode the Atlantic, the most careful estimates of its victims amounted to fifty millions.

"The people of this western continent rested securely in the protection of the waters of the wide Atlantic. But, to us it appeared a frail barrier. In March, 1832, in an introductory lecture, the following sentiment was announced: "Even England, with her high oxygenated atmosphere, is not protected from pestiferous blasts. The cholera at this very moment proves, that science has not purged the atmosphere of malignant taints; it stalks triumphantly through every clime, and bends its proud steps towards the setting sun; decides the fate of battles, and too often defies the tardy use of medicine. Shall we claim protection from its embrace, either from our physical condition or our moral graces? Nothing short of Almighty clemency can shield us. This region has already experienced desolating sickness; a new combustion of atmospheric gases might again light up the torch of pestilence; in which event we might become the actors of other scenes and other times, as depicted by an elegant historian.

> "'Dire was the tossing, deep the groans; despair
> Tended the sick, busied from couch to couch,
> And over all death shook his cruel dart.'"

"On the 8th and 9th of June following, (1832,) the Asiatic Cholera, as it had been called, showed its frightful aspect at Quebec; fifteen sickened, and seven died on the ninth; some of these were emigrants just arrived, and some were citizens. The belief of its communication from one person to another, by those who knew not its character, excited great alarm, as it had done wherever it had appeared. Its rapid spread to Montreal, New York, Detroit, the great West, and South, and even South America, cannot be detailed here, but may be learned from many excellent treatises written by American physicians. Finally, the cholera afflatus in a period of about seventeen years, had nearly embraced every section of the earth, destroying people of different temperaments and habits. In 1835 it still loitered in many places, but was not so severe.

"One fact in connexion with the first appearance of the cholera on the American shore ought not to be omitted; which is, that there was an easterly or north-easterly wind, which prevailed very constantly for four weeks previous to the 11th of June, 1832, when it ceased. There was an almost continued dripping, and it might be called a rainy season, together with a degree of coldness which threatened to blight the prospects of agriculture. Surely the coincidence of so long continued wind, and the immediate appearance of the cholera, are worthy of notice.

"There appear to be numerous circumstances which favored the progress of the disease in particular places, and amongst particular classes of people, which cannot be noticed now. Notwithstanding it followed the low courses of fresh water, and seized on the profligate and enervated, yet afterwards it did visit high and dry regions, and affect the most healthy and circumspect part of society. The local and exciting circumstances will be considered in their places; but none of these can produce the disease without the predisponent pestilent afflatus."

Dr. Gallup is unfriendly to the belief, that masses of animal and vegetable matter, in a putrid condition, engender disease. In opposition to that doctrine he advances what he denominates "*Instances in proof*," which are as follows.

"In support of this last proposition, we will briefly advert to a few out of many facts which might be presented.

"In all parts of our own country, as well as in others, there are numerous slaughter-houses; and at every such place there arises a stench very offensive to those not accustomed to it; and yet, the people engaged in the work, or visitors, are not made sick by it; and it is even confidently asserted that those people are not so likely to be affected as others when sickness prevails.*

"In the anatomical dissecting rooms, now numerous even in this country, and greatly multiplied in Europe, no disease has ever been assigned as originating from them, although it had ever been supposed, that decompositions of human organization afforded the most noxious effluvia.

"In every farmer's barn-yard, in the country, in every house-yard, also, in villages and cities, there is usually going on decomposition in the warm seasons of the year, and often the effluvia are very offensive, and yet no disease prevails, perhaps, in six years out of seven; but, if there should be disease, how familiar it is to refer it to those disgusting gases? These offensive gaseous productions are chiefly hydrogen, sulphureted and carbureted hydrogen, ammonia, and carbonic acid gas: none of which, separate or combined, ever produce a pyrectic habit, even where greatly evolved in chemical processes.

"During the impulse of national fervor that afflicted revolutionary France, the existing powers authorized the breaking up of the graves of the ancient sovereigns at St. Dennis, as a kind of revengeful insult. It is represented by Mr. Howard, that there arose from the tombs a thick, dark vapor, extremely offensive, which produced sudden depression, and even fatal asphyxia in some of the wretches engaged in it, but no defined pyrectic disease ensued. All these kind of gases impress the nervous system of external relation, without very essentially affecting the great system of nutrition, the seat disease. (Sect. xvi. 3.)

"Another instance has often been alluded to by etiologists, as occurring at Paris, and published by M. Thoset, in the Jour. de Physique, 1791† It consisted in the removal of

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* Dr. W. F. Edwards, "On the influence of physical agents on Life, p. 186, Phil. Edit. states, that at Montfaucon, in one of the greatest slaughtering establishments of horses, dogs, cats, &c. in the environs of Paris, "that the cholera affected scarcely any of the workmen." Also, by the advice of Dr. Duchatelet, that the workmen and their families, "are in general remarkably healthy."

† Phil. Jour. of Med. and Science, No. 17, p. 376.

the cemetery of St. Innocens, which covered about two acres of ground in the centre of the city, estimated to contain six hundred thousand bodies, which had been accumulating for six centuries; it occupied two years in removing it. The stench was quite insupportable, and often the mephitic vapors affected some of the laborers with dizziness, syncope, tremors, and even asphyxia, yet no fever occurred, nor any endemic prevailed.

"Other instances of the removal of cemeteries might be mentioned, and with similar results; and also, we might take into the account the manufactories of animal substances as the making of adipocire, candles, soap, &c. The extensive fisheries also; foul wharves, giving out complicated and disgusting effluvia, might be adverted to, and every reference would only confirm the fact, that neither endemic nor epidemic disease, has ever been shown to be generated by them, and that these gases exist in full profusion during the most healthy periods. Professor Chapman has done a service to medicine, in collecting many facts to support the thesis in his Thoughts on the Causes, Phenomena, and Laws of Epidemics, &c.

"Having a presentiment that the enlightened community of medicine will readily assent to the foregoing positions, this part of our subject may be relinquished, whilst we enter upon the other, and by far more laborious part."

It has long been a question very strenuously contested, whether *cold* be in its nature, a *sedative* or a *stimulaut?* And were the contest decided by the *number* of polls that have taken sides on the subject, the *sedative* doctrine would abundantly triumph. But we are not convinced that the *preponderance* of sound philosophical testimony, in favour of the *stimulant* doctrine, would not be equally decided and abundant. And if we mistake not the signs of the times, on the subject, the latter doctrine is now on the ascendant. Be this however as it may, it appears from the following clause, in his "Etiology," that our author is a believer in the *stimulancy* of cold.

"*Cold considered Pathologically.*

"One of the most unfortunate of all errors that has ever crept into pathology, is the hypothesis, that cold acts as a sedative on living animal tissues; or, that it debilitates them. It will on the contrary be contended, that cold is a positive agent, and acts on vital tissues as an astringent, or tonic. It is then quite easy to conceive, that an inability of function may be the immediate effect of its application, in any considerable degree. Yet, when high heat has been applied, the admission of cold becomes indirectly invigorating. Cold in an incompatible degree impedes the nervous energy, also the circulations and functions of organs generally. The condensation of tissues affects the minute nervous fibrillæ producing enervation, and insensibility to ordinary stimulations; it produces an inability of nervous energy, whilst the simple tissues are condensed.

"Cold applied to the surface, simultaneously affects the internal tissues. A state of enervation is more or less every where produced, yet often unequal. Innervation and circulation are impaired. Some tissues for a time may act in excess; but, when the effects of cold are in any considerable degree, the deficiency of function may be so great, that the instinctive energies cannot prevail, and life may be extinguished, even whilst the inmost tissues are held in rigid endurance."

On our author's "Synopsis of Nosography" we can dwell long enough only to say, that, for its length (and it is not short) it is one of the most elaborate and laborious American productions, in medicine, that our country has witnessed. It possesses nearly all the learning, but not all the unapplicableness to practical and useful purposes, which characterizes Dr. Good's monument of erudition and pedantry, patience and perseverance, on the same subject. Without any further notice of it however, we must pass to our author's third "Division" of his "Outlines;" his

THERAPEUTICS.

Here again our remarks must be few and brief, this article being already protracted beyond its intended limits. Although, under a critical examination, we could find much to except to, in our author's "Therapeutics," it is perhaps notwithstanding the least exceptionable, and the most useful "Division" of his work. True; without great modification, the practice he recommends would be altogether inadmissible in the treatment of our western diseases. The reason is plain. It is suited to the complaints of a far different situation and climate—we mean New England. In speaking respectfully of it therefore, we regard it only in its relation and aptitude to the maladies of that region. As easily could Dr. Gallup devise and mature a successful scheme of buffalo and bear-hunting, without ever having seen a buffalo or a bear, a wilderness or a prairie, as such a scheme for the treatment of the fierce diseases of the Mississippi Valley, without having practised on them. In the treatment of the complaints, with which he has been conversant, we are inclined to believe him a skilful practitioner. Under the head of "*Pharyngitis, Laryngitis, and Tracheitis*" he has given a few paragraphs, which will be read, as we feel persuaded, with a deep interest, by every American. We allude to his exposition of the errors, neglect, and inefficient practice, which led to a fatal termination in the last illness of Washington. The following are his remarks on that subject.

"The medical reputation of the United States suffered not a little obscuration, and the nation an irreparable privation, in the death of General Washington at the very close of the last century, by an imbecile, doubting management. It is not pretended but that he was himself in fault; so like many others in high stations, skilled in every thing, except what

relates to the character of disease. After an exposure in December, on horse-back, he had hoarseness and sore throat, but called it a *cold*, and said in the evening, "Let it go as it came," as stated in Paulding's life. So nothing was done. He read newspapers on the evening of Friday, and "had been remarkably cheerful all the evening." Went to bed as usual. Between two and three o'clock had a rigor; but made no alarm, and still had nothing done. Early in the morning of Saturday was found, "breathing with difficulty, and hardly able to utter a word." Whenever he attempted to swallow, he became "convulsed and almost suffocated;" at the same time "some phlegm followed" the return of vinegar, molasses, &c. attempted to be swallowed. This was, no doubt, a complicated case of laryngitis, associating other contiguous tissues, and producing pharyngitis, with some appearance of tracheitis.

"An overseer attempted to bleed, without any previous preparation by external warmth; he obtained half a pint, when Mrs. Washington interfered, and had it stopped. Dr. Craig arrived next day, at nine o'clock, A. M. He put an epispastic on the throat; took more blood; again bled; and repeated at three o'clock, P. M. No account is given how much, but it "ran very slowly, appeared very thick," and no doubt it might have been added, was very dark. Bleeding without other adjuvants is commonly useless. However, "calomel and tartar emetic were administered, without effect." At five o'clock, P. M., he said, "I find I am going, my breath cannot contiue long." He languished until about ten o'clock, P. M., and expired December 14, 1799. From the time of the rigor about twenty hours.

"No doubt this case demanded the most efficient constitutional as well as local treatment, and an at early period. At a later period there might have been some chance of success. It might be inquired, at what later period of the disease there existed a fair chance of relief. His case required diligent attention at the time he went to bed; then it is probable a pediluvium, and an emetic followed by sweating, would have been sufficient; especially with venesection after the surface became warmed.

"At the time of the rigor, the morbid changes had proceeded so far as to require very vigorous measures. He then ought to have taken the universal warm bath for twenty minutes; or mild steam well applied might have been a substitute, but never an equivalent. Then copious bleeding, even to faintness, closely followed by an emetic of tartarized

antimony. Warmth continued with diluent aromatic drinks, as hyssop, pennyroyal, &c., followed by copious and continued sweats. Instead of an epispastic to the throat, as was done in this case, an extensive emollient cataplasm of linseed meal and wheat bran; first anointing the throat with the anodyne saponaceous balsam, or some camphorated oil. Also, cataplasms with mustard seed flour, to the whole of the feet. All should have been done and repeated in the most perfect manner, under the immediate inspection of the physician.

"But, no physician saw him, to prescribe, until Dr. Craig arrived at nine o'clock, A. M. Important time had been lost; the appearances were inauspicious. Still, however, the patient ought even at this late hour, and in a disease making awful strides, to have had the chances of relief, and this was the last hour that presented much prospect. As nothing can be gained in these cases if caloric in a humid form to the surface is neglected, he ought to have had all the measures diligently applied, as mentioned before, at three o'clock, the time of the rigor.

"An emetic was indispensible at either of the periods. Although the difficulty of swallowing was great, yet at either period it is probable a little of a concentrated solution of tartarized antimony might have been got down, or at any rate by frequent trials, some might have been absorbed in the fauces. At the same time the epigastrium might have been bathed every ten minutes with a warm and strong solution of the same. Furthermore, a scruple of the same article in solution, might have been injected as an enema. By persevering, there is but little doubt, emesis might have been effected. The influence of this process on the general capillary systems was as much needed, as its utility in dislodging phlegm from the trachea."

We regret that a want of room prohibits us from giving extracts from the "Outlines" explanatory in full of our author's mode of treating pulmonary consumption. The treatment is bold, and, according to his report of it, unusually successful. In consequence of this, he speaks of the complaint as being much more tractable, than it is generally considered—especially if it be encounted at an early period. The remedies on which he chiefly depends, are the warm bath and blood-letting *often repeated*, and sometimes long persevered in, emetics

regulated exercise, and a diet mild, and easy of digestion.

The Doctor illustrates his practice and its success in this complaint, by a detailed report of his treatment of two cases, highly threatening, but which terminated favorably. His entire account of the malady we deem curious and interesting, and earnestly recommend it to the attention of physicians.

But we must here close our article. And we do so by again repeating, that Dr. Gallup's "Outlines" contain much matter that is valuable, mingled with not a little that is totally useless—if not worse. By physicians sufficiently enlightened in their profession, by experience and observation, to be able to adopt and reject, in the contents of books with judgment and skill, the work may be read with no little benefit. And the same may be done by medical pupils, whose studies are superintended by vigilant, faithful, and competent preceptors. But, without such superintendence, we cannot recommend the work as a text-book for the elementary studies of youth.

In conclusion: there are two points (the *beginning* and the *end* of his paper) where a reviewer may speak not only of the general character of the *work* which he reviews, but also of the nature and character of the *subject* of which it treats. And as we did not touch on the latter topic, in the *commencement* of this article, we shall briefly advert to it in its close.

The "INSTITUTES OF MEDICINE" embiacing, as they do, the principles and philosophy of *all the other branches of the profession*, are, of course, the *highest and most important* of all. Without them medicine would not be an *embodied science*; but only an assemblage of kindred, but disjointed, and empirical pursuits. The Institutes are the life-blood—the soul of the profession, without which it would be even worse than

inanimate and inefficient—it would be a scheme of *haphazard* action, much more likely to do mischief than good. It would resemble navigation, deprived of the aid of its chart and compass. Its making good its course to the wished-for haven, would be a matter of accident—the chances against its arrival being *multitudes to one.*

If this representation be true, (and who will gainsay it?) to write a work on the Institutes of Medicine is an *arduous*—it would be hardly extravagant to say—a *mighty* undertaking. Its accomplishment in a style and degree of *general* excellence worthy of its subject requires talents and attainments, industry, perseverance, and a lofty ambition, which belong to but few of the medical profession—or of *any* profession.

The production of a competent work on the Institutes requires in its author a thorough, minute, and accurate knowledge of every other branch of the profession. Nor is this all. Not only must he be in possession of the almost boundless multitude of *requisite facts.* He must have so clear and correct a perception of their *relations to each other, and to their aggregate,* as to be able to deduce from them the sound abstract, and general principles, which they are calculated to sustain. To be qualified to do this, he must be amply endowed with *all* the intellectual faculties, especially with those of the highest order; (we mean the *reflecting*) and those faculties must be strengthened and rendered dextrous in action, by assiduous and skilful cultivation and practice. In a word, he must be, in the full and genuine meaning of the term, a MEDICAL PHILOSOPHER. And of such characters the number that has adorned the profession of medicine is small. It would not be extravagant to say, that, since the days of Hippocrates, there has not been one for each succeeding century—not one we mean of the *highest rank,* and competent to the achieve-

ment we are now considering. So true is this, that there does not exist at present, in any language with which we are acquainted, a single work on the Institutes of Medicine, worthy in all respects of the momentous subject. Many such works are high in merit; but they are all below the standard they should attain. Nor do we mean by this assertion to disparage the Medical Faculty of either the present or former times. Our only object is, to express our own estimate of the exaltedness of MEDICAL PHILOSOPHY, and the arduousness of ascent to the pinnacle where it perches. C. C.

Selections from American and Foreign Journals.

On Pain of the back in remittent Fever.—Dr. Kreamer, of Aix-la-Chapelle, in a work on intermittent Fever published in 1837 asserts, that in all the intermittent fevers he has had an opportunity of observing, there exists at the situation of the first dorsal vertebra, a more or less severe pain on pressure. In order to perceive the symptoms, the pressure must be made from behind forwards, with the fingers upon the spinous process of the individual vertebra, not upon several vertebræ together; for in this latter case one bone is less affected in its relations with the others than in the former. If the intermittent fever is considerable, or old, or masked, pressure on the first dorsal vertebra, by giving pain, will suffice to evince the existence of fever. In simple or mild cases, the pain may be but trifling, and may require, particularly in phlegmatic individuals, that the attention may be directed to it; and in order to render it evident, pressure should be first made on the first cervical vetebra, then on the last dorsal, und then lastly on the first dorsal, when the patient may be asked if he feels any difference in the sensations produced. The pain exists during the paroxysms, as well as in the apyretic interval, is stronger in epidemic than in sporadic intermittent fever, exists in all forms, and continues during the sequelæ,

Dr. Grossheim has examined fifty cases of intermittent, with a view of testing the correctness of the above opinion, and the following are the results of his observations:—"1st, pain on pressure on some part of the spinal column is a constant symptom of intermittent fever, except in those cases in which the ligaments of the vertebræ have become by age or disease so rigid that they will not yield to pressure. 2. There is no definite locality to this pain; it may be situated in any

part of the column, but is most frequent in the middle of the dorsal portion, especially in quotidian intermittents. 3. The extent of the pain also varies considerably; one or two vertebræ only may be tender; and the pain rarely occupies the space of more than five or six; it may also be situated at distant parts, with intervals in which none is excited by pressure. 4. The intensity of the pain is equally variable. Sometimes it was so severe that the slightest touch of one of the spinous processes produced severe suffering; but sometimes violent pressure was required to detect it. Among those vertebræ that excited pain when pressed, the middle one was commonly the most sensitive; and in those above and below it, the tenderness gradually decreased. 5. The pain was more severe during the paroxysms than in the intermissions. When the severity of the fever diminished or the tendency to its returns grew less, the severity and the extent of the pain in the back also decreased; but the complete removal of the fever was not always accompanied by the entire loss of the pain, which often continued in a modified degree after the fever had ceased to return, and remained the longer the more severe it had previously been. 6. Complications of the intermittent fever did not appear to have any influence on the pain: it continued when the character of the fever was altered either for the better or for the worse, and it returned in cases of relapse.

From observing the constant resistance of this symptom, the author was induced to try what would be the effect of remedies that would tend to correct the local excitement that seemed to exist. He relates very briefly five cases, in which eight or ten leeches were applied over the spine in the situation where pressure gave the most pain. In four of these no other remedy was required; the pain ceased in a few days, and there was no recurrence of the febrile paroxysm.—*Brit. ish and Foreign Med. Rev., July* 1839, *and Oct.* 1840. *Am. Jour. Med. Sci. for Jan.* 1841.

External Application of the Oil of Ergot.—Mr. Wright has found this oil a valuable external application in cases of local rheumatism. He has tried it in three instances, and in all of them it has proved curative. The affected part should be well rubbed with it for a quarter of an hour, night and morning, until relief be obtained. It is one or the best remedies with which he is acquainted for the cure of toothache.

He has repeatedly known it to subdue the pain when kreosote has failed. But perhaps its greatest value, as an external application, is in the arresting of hæmorrhage. He has often wounded small arteries in dogs and rabbits, and subdued the bleeding with a drop of this oil. Hæmorrhage from the jugular and femoral veins has been similarly arrested. The troublesome bleeding which sometimes follows the extraction of a tooth, and leech-bites, it is equally efficient in stopping.

In a severe case of epistaxis, he arrested the hæmorrhage, by injecting up the nostrils equal parts of very dilute spirit and oil of ergot; and he has little doubt that in the severe cases of flooding which succeed delivery, the injection of this oil diffused through water into the uterus would be productive of the happiest results.—*Edin. Med. and Surg. Jour.*, July 1840.—*Ibid.*

Solution of Bi-chloride of Mercury in Itching.—Dr. Prus states that he has often succeeded in the treatment of prurigo, an affection often obstinate, in the old men under his care in Bicêtre, by means of lotions night and morning, over all the parts where the pruriginous papules exist, with a solution of bichloride of mercury, one drachm in half a pint of water.

Mr. Duparque employs with benefit the same solution in pruritus of the internal surface of the labia pudendi, which occurs in some females in the decline of life, and which is often intolerable and difficult of removal.—*Jour. de Connaiss. Med.*, May, 1840.—*Ibid.*

On the Causes of Scrofulous Diseases.—M. Lugol proposed to himself the question whether scrofulous diseases ought to be regarded as the result of accidental external causes, or that of a hereditary predisposition? And the conclusions to which he has arrived are the following:—

The accidental causes do not necessarily produce scrofula, at least it is very doubtful whether they are alone sufficient to produce the disease. The production of scrofulous diseases, however, by hereditary descent, is the most common and the most clearly proved, and which we are enabled to trace in the great majority of instances.

The appearance of scrofula in one child is a sure sign of the whole of the rest of the family inheriting the scrofulous con-

stitution, by virtue of which all the other children have the same original predisposition to the disease. If the families which betray the marks of inheriting a scrofulous constitution are observed with care, it cannot fail to be remarked that they are subject to a great mortality. Scarcely a fourth of the children who are born attain the age of puberty, and it is by no means a rare occurrence to find that families, originally very numerous, have been all cut off even before they reached this period of life. Scrofulous disease, in fact, is one of the most active causes of mortality of the human race; there is no other disease which cuts off so many and so young victims.

In his memoir, M. Lugol endeavours to show that parents who are at present apparently free from scorfulous affections, and yet beget scrofulous children, can, in almost every instance, be traced to have had brothers or sisters who have been affected with scrofulous diseases, or have themselves been the subjects of some scrofulous affection in early childhood. There have also been seen instances of scrofula appearing in the parents, after having had born to them scrofulous children. He consequently arrives at the conclusion, that hereditary diseases do not pass over a generation, as has been generally supposed,—*Edinburgh Med. and Surg. Jour.*, July, 1840, from *Comptes Rendus*, January 20, 1840. *Ibid.*

Treatment of local Paralysis by Phosphorus.—Several German writers very strongly recommend the use internally as well as externally, of phosphorus in cases of paralysis of the optic and auditory nerves.

In a case related by M. Dezeimeris in his late elaborate memoir on diseases and injuries of the frontal sinuses, where deafness and blindness on the left side supervened upon a severe injury of the head, he resorted to this treatment with success.

He prescribed as follows:

℞. Phosphori gr. j, solve in
Olei animalis æther ʒj,
Olei caryophyll. ♋j.

Dose.—Three drops, to be gradually increased to 20, to be taken on a piece of sugar night and morning. And

℞. Phosphori gr. ij.
Olei animalis æther ʒj.
Olei cajeputi ʒss. Solve.

The eyelids to be well rubbed with this embrocation three or four times daily,

A blister also was applied upon the mastoid process and kept open.

In four weeks the patient had quite recovered his hearing and sight.—*Med. Chirurg. Rev.* Oct. 1840, from *L'Experience. Ibid.*

New Operation for Prolapsus Ani. By M. Robert—Relaxation of the sphincter ani being the cause of this disease, all the remedies hitherto employed for its cure are inefficacious when it arrives at the last stage, as they can only act on the mucous membrane of the rectum. These reflections have induced M. Robert to shorten the sphincter in proportion to the amount of relaxations, so that the two cut surfaces of the muscle might unite and form a narrow ring to oppose to the descent of the mucous membrane. This operation was performed with success on a washerwoman, thirty-three years of age, in June, 1839, in the hospital of La Pitié. This woman in her third pregnancy had a prolapsus ani, which was only temporary though it caused some pain. Her fourth pregnancy produced a prolapsus uteri, a permanent and considerable prolapsus ani, with relaxation of the abdominal walls. M. Robert excised a portion of the mucous membrane with some temporary relief; but the disease afterwards increased, the discharge of fæces became involuntary, and she suffered from pains in the loins and upper part of the thighs. When she entered the hospital the sphincter was so much relaxed that four fingers could be easily introduced.

The patient having been prepared for the operation by progressive diminution in diet, and the use of opium in order to effect long-continued constipation, M. Robert proceeded to operate in the following manner:—An incision was made on each side of the anus, each incision being commenced a few lines external to the orifice, and carried backwards towards the coccyx. The fold of integument between the incisions, together with the portion of sphincter it covered, were removed, and the muscle was thus shortened by half its length. The wound was united from one side to the other by three points of suture. On the sixth day after the operation the sutures were removed. Union was nearly complete, but a fistulous passage remained from the anus to the coccyx. On the fifteenth day the woman had not passed any fæces. On the next day the want of defecation being felt, in order to prevent any straining, the bowels were relieved by the cu-

rette. On the forty-first day the patient, who before the operation could not retain her fæces, kept an injection during the whole day; there was no more prolapsus; the opening had become of the ordinary size; but the finger when introduced did not experience the energetic contraction of the sphincter which occurs in the normal state. With the exception of a slight protrusion of mucous membrane the cure was complete in August.—*British and Foreign Med. Rev.* Oct., 1849, from *Gaz. Med. de Paris*, June 20, 1840. *Ibid.*

New facts with regard to Strangulated Hernia. By M. Laugier.—Every one knows that in strangulated hernia, the upper extremity of the intestine, or that part which is comprized between the stomach and the seat of strangulation, becomes distended by fluid, gaseous, or fecal matters, whilst the lower portion remains flaccid, or, at least, the matters found in it do not distend it more than usual.

No attempt has yet been made to draw practical inferences from this fact, so as to use it as a means of distinguishing intestinal from omental hernia; or which portion of the intestinal tube, whether the large or small intestine, was contained in the hernial sac. This has, however, been done by M. Laugier, who considers it both as a simple and sure means of diagnosis, besides possessing the additional advantage of indicating the relative urgency of the case for operation. The results of his observation are embodied in the following conclusions.

1. The extent, the form, and seat of the meteorism of the belly, during strangulated hernia, vary according as the hernia consists of omentum or intestine, and according as the upper extremity consists of the small or the large intestine. Its extent varies also according as the portion of small intestine included in the hernia is more or less distant from the stomach.

2. In omental hernia, before the development of peritonitis, the belly is soft, and flat even in the neighborhood of the hernia. There is no meteorism.

3. Meteorism appears very rapidly when the hernia consists of intestine.

4. When the hernial sac contains the large intestine, the sigmoid flexure of the colon for example, the upper extremity consisting of nearly the whole of the intestinal tube, the meteorism is general, and gives to the abdomen an almost cylindrical form.

5. If the small intestine is alone in the hernial sac, or along with a portion of omentum, the flakes and the epigastric region are soft and depressed: the swelling of the abdomen occupies the hypogastric and umbilical regions. The swelling is spherical, or nearly so, resembling in this respect some encysted tumours, or the uterus at the sixth or seventh month of pregnancy, from which, however, it differs in many essential characters.

6. When the strangulated part of the intestine is near the stomach, the swelling of the abdomen is trivial, in proportion to the duration of the strangulation; for in that case the upper extremity of the tube is only of small extent.

7. From these facts may be deduced the unexpected and important conclusion, that in crural hernia, and in some inguinal hernias, where gangrene is most to be feared, all haste should be used either to reduce it by the taxis or by operation; for if by the occurrence of gangrene of the intestine an artificial anus should be formed, its proximity to the stomach renders it more dangerous for the patient. A swelling of small extent, limited to the neighborhood of the hernia generally, inspires a security which may lead to fatal results; whilst it is the general meteorism, or one, at least, which is very extensive, that alone permits of delay, since it indicates the incarceration of a portion of intestine which is far from the stomach.

8. It is only before the accession of general peritonitis that the characters of the windy swelling, above indicated, can be relied on; they are most marked at that stage.

M. Laugier adds, that these remarks have been all verified by careful clinical observation, and by the result of many operations for hernia.—*Ed. Med. and Surg. Jour.*, July, 1840. from *Comptes Rendus*, 2d March, 1840. *Ibid.*

Treatment of Diseases of the Testicle by Compression.—Langston Parker, Esq., extols this practice as possessing great advantages over the ordinary methods. "In common swelled testicle compression may be employed," he says, "as soon as the patient is able to bear the application of the plasters; and this is generally much sooner than might be supposed, however acute the disease may be. The great advantages possessed by compression are, almost immediate relief to pain; which is occasioned, in great measure, by the dragging and weight of the inflamed organ, and is mitigated, and

most common.y completely removed by its support: the patient can pursue, in most instances, his ordinary duties, and there is no occasion to confine him to bed; a circumstance of great importance where concealment is wished, as it always is, in diseases of this kind. In addition the cure is much more quickly, and much more perfectly affected by compression than under the ordinary method, the swelling of the gland more rapidiy subsiding, and less commonly leaving behind it any chronic irritation and enlargement, which is liable at some future time, in bad constitutions, from injury, or from a renewal of the disease, to degenerate into some of the malignant forms of disease of the testis.

"Chronic inflammation and enlargement of the testis also very commonly occurs as one of the symptoms of constitutional syphilis, as well as from other causes. Here, also, compression, as a local remedy, is by far the most valuable of any with which I am acquainted, particularly in those cases where enlargement of the organ, from chronic inflammation, has taken place to a considerable extent, where the weight chiefly incommodes the patient, and little or no tenderness is experienced when the part is handled.

"I am not prepared to say how far compression may be of service in the incipient stages of certain forms of malignant disease of the testis, but believe much advantage may be derived from its employment, since, in addition to the benefit to be looked for from mere compression of the part, much good may be expected from the constant topical application of mercury, iodine, and other remedies, only to be well accomplished in this way.

"Compression of the testis is to be practised by surrounding the organ by straps of plaster, applied as closely and as tight as the patient can bear. The plasters I generally use are those of ammoniacum, with mercury, or iodine and belladonna. These are to be smoothly spread upon thick wash leather, and cut into thin straps; an assistant then grasps the tisticle, and draws it as far downwards as he can in the scrotum, which should previously be washed with a little spirits of wine. The first strap should be placed at the upper part, circularly round the testis, and succeeded by others, placed in the same direction, till the whole is covered. A second series of straps is then to be placed in an opposite direction to the former, crossing them at right angles, from behind forwards. One or two long ones may then be placed over these, where they appear to be most needed, to keep the whole in place. The parts should be supported by a well-fitting sus-

pensory bandage, although the plasters at once relieve any inconvenience or pain that may have been occasioned by the dragging or weight of the testicle."—*Lancet*, July 25, 1840. —*Ibid.*

Case of Phlebitis successfully treated. By GEORGE BELL, M. D., &c.—Phlebitis is a disease over which local remedies have little control, and one whose general management does not appear to be accurately understood. Cases of successful treatment, therefore, are alike interesting and important, for it is from their multiplication alone, that correct principles can be deduced. In order to assist in the fulfilment of this object, we record the following history:

Richard Millar, aged 22, of spare habit, sallow complexion, and habitually temperate, was admitted into St. Bartholomew's Hospital on the 8th of June, 1836, laboring under œdematous erysipelas, of the forearm, and simple integumental inflammation of the upper arm on the right side. His expression was anxious; the skin was hot and dry; the pulse frequent and full; the bowels were constipated; and the other symptoms which usually attend fever were observed.

He stated that, about ten days previous to his admission, he had been bled on account of a pain in his side, that on the following day he felt well, and returned to his work. The integument surrounding the wound made by the lancet became slightly inflamed and painful; but he continued at labor, heedless of the increasing pain and inflammation, until inclination and ability to be active had so diminished that he was obliged to confine himself to the house. His symptoms gradually increased in severity, until the evening of the ninth day, when he presented himself at the hospital in the condition already described. He had not been subjected to any treatment.

Twenty-four leeches were applied to the upper arm; the limb was directed to be fomented; and a cathartic of calomel and the compound extract of colocynth was administered.

On the following day the arm was less painful, but there was no abatement in the swelling, althoug the parts were less tense, and no improvement in the general symptoms. He now, for the first time, complained of pain shooting from the site of the wound towards the axilla; his intelligence was less acute, and his tongue was beginning to be incrusted at

the the edges. The basilic vein could be felt indurated nearly throughout its whole extent.

On the 20th, he was in the same state; the wound and the parts in the immediate vicinity were puffy, and obscure fluctuation could be felt. A small incision was made in the tumour, and about one drachm of purulent matter was evacuated. On introducing the probe, it was found that the instrument could pass in two directions only, viz. upwards and downwards, in the direction of the course of the vein, which led to the opinion that the matter had been evacuated from a venous abcess. This opinion was strengthened by the fact, that on gently pressing the vein from above dowards, an additional quantity of tinged purulent matter to the extent of two drachms escaped; and the vein, which previovsly felt hard and tense, had now become comparatively soft and pliant.

His pulse was still rapid, but compressible, and his bowels were inactive; the tongue foul; thirst moderate; and the skin dry but not parched.

A purgative enema was directed to be immediately administered; he was ordered to take every eighth hour a pill, consisting of two grains and a half of chalk and mercury powder, and the same amount of Dover's powder, and to use the effervescing draught according to the symptoms.

21st. The constitutional symptoms were improved; the swelling and pain of the arm were abated; but he complained of pain below the short ribs on the left side, and acute pain in the left knee-joint. The pain of the side was relieved by pressure, but that of the knee was much aggravated by the slightest touch. The knee was fomented. In a few days the mouth was slightly affected by the mercury; the limb regained its normal condition, and the patient as regards general symptoms, was convalescent. The vein was contracted to the size of a violin string. The alterative was omitted so soon as the mouth became affected, and some bitter infusion was prescribed.

On the 28th, he was quite convalescent, and discharged, with a recommendation to go to the country.

This case excited a good deal of interest at the time of its occurrence, and it is an important one in several respects. On the evening of admission it differed in no way from the common case of erysipelas with œdema, for he complained of nothing that could lead us to consider this lesion as secondary, either in importance or event. Our inquiries were

directed towards the discovery of *phlebitis*, for considering the wound made by the lancet as the centre, starting point, or the immediate cause of the erysipelas, we thought that it might give rise likewise to inflammation of the vein. This suspicion was not confirmed by aught seen or felt, for the redness and swelling of the upper arm effectually prevented any precise information being acquired by local examination. On the day succeeding that of his admission, matters were somewhat changed; there was pain distinctly referred to the course of the vein, the tenseness of the arm was diminished, and the indurated vein could be felt. Added to this, a tendency to typhoid fever was manifest. A question arose as to the propriety of continuing the antiphlogistic treatment. All the benefit to be expected from depletion or other depressing means had been already conferred, and we doubted the power of such measures, either to arrest or modify the progress of the local disease. Existing signs warranted this opinion, for the violence of the disease was abated, and the force of the constitution was declining; and the event of the following day confirmed it, for purulent matter had been already secreted, and was approaching the surface. We had to do, therefore, with the constitution; we had to deal with the fever which had been awakened.

There is a peculiarity in the fever which attends this and some other local inflammations which cannot be accounted for, either on the tissue affected, or by the intensity of the inflammation. It differs from the fever which accompanies pneumonia, pleurisy, and other simple acute inflammations, which is purely symptomatic, and it is identical with that described by the late M. Broussais, as symptomatic of *gastro enteritis*, or inflammation of the glandular and follicular tissue of the bowels. It has the character of what, in this country, is denominated continued fever; it is little tolerant of depletive measures, and but slightly affected by treatment of the local affection. It is essentially an idiopathic fever, excited by a particular cause, of which cause it immediately becomes independent. We hazard no theory regarding the primary cause of fever, but, having referred to the doctrine of Broussais, shall merely express a doubt whether the fever he recognizes as symptomac of intestinal inflammation, is not rather dependent on disease having existed, by which the general irritability of the system has been so far modified as to render it obnoxious to common causes. In a word, we think that the fever is purely iodiopathic in its nature; that it occurs, not because the gastro-intestinal mucous membrane

is depraved, but because it has been depraved; and that the erysipelas, phlebitis, &c. are merely exciting causes, acting on a system predisposed to fever, and waiting an opportunity to exhibit its predisposition.

Having hinted at what we consider to be the nature and origin of fever, it may be expected that something should be said about the nature of the causes of which it is so commonly regarded as symptomatic. A man receives a wound, lacerated, contused, or simple; erysipelas occurs, a degree of fever accompanies it; he is bled, and phlebitis ensues. Little benefit is derived from the depletion, the fever speedily loses any signs of vigor it may have at first exhibited; and it assumes a typhoid type altogether identical with continued fever. This is a case which we have repeatedly witnessed. Here the man was predisposed to erysipelas; an acquired condition of the economy rendered him obnoxious to causes which, to the healthy, are sources of inconvenience rather than of danger. Anterior derangement was proved, by the changed irritability of the part in which the local disease appeared, and the constitution responded by a fever disproportioned in intensity to the exciting cause. Erysipelas is a local disease, recognizing a constitutional origin, and the fever excited by it is idiopathic in essence, originates from the same cause, and is born to immediate independence.

Reversing the order of events, local inflammation frequently arises during the progress of continued fever, and although the fever is its exciting cause, it is primarily dependent on the same anterior vicious working in the system which gave origin to the fever. The occurrence of inflammation in one tissue or organ rather than in another, can only be explained by the doctrine of peculiar susceptibilities. Inflammations occurring in this way are denominated spontaneous, by which term we understand that they arise independently of any influences external to the animal body. If this definition be correct, it implies some anterior change in the diseased capillaries, else when the same stimulus is circulating through the system, why does not general instead of local inflammation arise? It may or may not be true, that fever is another name for general inflammation; but the question still returns, why in addition have we another and a distinct inflammation? One year a large proportion of the inhabitants of this town were affected with bilious diarrhœa; another year few escaped the depression of influenza; during a third year many above the average suffered the pains of rheumatism; and every year hundreds are seized with continued fever, to

which is superadded a local inflammation, termed a complication, and occurring like an epidemic. Some peculiarity in the causes of the epidemic seems to determine the nature of the complication. The constitution has previously been so modified as to render one organ rather than another susceptible of generally acting causes. What may be affected through such a diluted imperceptible agent as these may be produced by the stronger and more sensible operation of unnatural, vicious, or civilized regimen, moral as well as physical. This seems to be the remote cause at once of the local disease and the fever it awakens, and as both are constitutional in origin, our remedies should be chiefly applied through the medium of the constitution. Experience shows that topical remedies have little effect on the local evidences of constitutional ailment, and still less on the fever which the local disease kindles.

Erysipelas may be the exciting cause of phlebitis. A middle-aged man, of dissipated habits, received a wound on the hand; erysipelas ensued, which gradually extended up the arm to the body, so as to involve the shoulder and side of the chest. He died. On dissection it was found that the subcutaneous cellular tissue of the upper arm was affected, the limb was œdematous, the texture immediately surrounding the vein was infiltrated with purulent matter, the coats of the vein were thickened, the *vasa vasorum* were distinct, and the canal of the vessel was filled with purulent matter. We have reason to believe likewise that phlebitis is sometimes the result of burns. We have more than once made minute examination of the veins of subjects brought to the dissecting-room with marks of recent injury from fire. In these cases it was found that the plexus of veins at the bend of the arm, together with the main trunks, were effected in the manner above described. In addition to this there are other reasons for believing that burns sometimes prove fatal by inducing phlebitis. We have observed that burns by which the vitality of the skin is immediately destroyed, are, *cæteris paribus*, less fatal than those which excite such a degree of inflammation, as despite treatment, to advance to mortification or sloughing of that texture. The general symptoms in such cases are similar to those observed in phlebitis; the fever is seldom of a character which demands decided antiphlogistic measures, but, on the contrary, is of such a nature as to require our being on the watch for the time when stimuli are necessary.

We have seen several cases in which the injury was con-

fined to the upper part of the arm, and in which a fever, speedily assuming a typhoid type, set in, and carried off the patient. In comparing such cases with others, in which the vitality of the skin was destroyed by fire, and the patients recovered, we are inclined to believe that the constitutional symptoms were not, in the first class of cases, dependent solely on the integumental inflammation, but that some other local inflammation had arisen which determined the fatal event. The extent of the injury in the case referred to, would not account for so serious a result. One fact, mentioned in the history of Millar's case, enables us to ask whether the practice of re-opening the wound in the vein, with the view to discover and evacuate purulent matter, might not with advantage become more general. We cannot see that it involves risk; and it is reasonable to expect that it might frequently be productive of positive good.

With regard to the treatment of *phlebitis* in general, the practice pursued in the case of Millar seems to be worthy of imitation. It was adopted in his case, because we had frequently seen it successful in cases of erysipelas in which the constitution was similarly disturbed. Local depletion cautiously employed, alteratives, gentle laxatives, and enemata, succeeded by nutrients and a moderate use of stimulants, are the means best calculated to relieve the constitutional suffering, and conduct our patient safely through his convalescence. We say that local depletion should be cautiously employed, because danger may, and often does arise from acting on the imagination, that if it does no good it will do no harm, and we approve of alteratives, because we believe that the severity of the symptoms chiefly depends on a morbid condition of the intestinal and hepatic secretions, which can be most certainly remedied through their influence. We say this, not only because we have seen their beneficial effects in this case, but because we have witnessed their salutary operation in many cases of continued fever, evidently dependent on intestinal derangement; because we have observed their beneficial effects in cases of foul ulcers, and ill-conditioned wounds in which the general symptoms were similar to, though not so intense as those which accompany *phlebitis;* and because we have found them to be valuable agents in many cases where long continued bad health was clearly referable to a depraved condition of the gastro-intestinal mucous membrane, as indicated by the tongue, skin, eye, temper, and the mental and corporal activity of the person. This would be a fitting place to enlarge on sympathy with a view

to explain all this. We might talk at length and much more mysteriously about the sympathy which exists between the stomach and other parts of the system. We might quote the numerous propositions of authors, criticise their logic, and express wonder at their powers of supposition. We might consider their data, modify their reasoning, and draw new, perhaps opposite conclusions; but in so doing we should be aiding and abetting in mystifying what has been already sufficiently obscured. Thus, although a fresh hypothesis might be invented, the words explanatory thereof traced, still no one would be benefitted thereby; for it is absurd to speculate on conceptions of whose genuineness we have no certain test. Too much caution cannot be observed in the application of the inductive method of reasoning to the solution of questions connected with a purely practical science.

In the cases alluded to, we dread the active employment of cathartics, unless the bowels are distended with feculent matter, and a necessity evidently exists for their immediate evacuation. In such instances we should employ purgatives with a view merely to unload the bowels, and not with that perseverance which implies a belief in their power to remedy the lesion which determined the lodgement. We here desire that our opinion be not regarded as opposed to the doctrine so ably propounded by the late Dr. Hamilton, whose name is so closely and justly associated with the principle of employing laxatives without purging. Dr Hamilton refers to cases in which it is evident that the symptoms are owing to abdominal irritation produced by the accumulation of feculent matter; and not to cases where they are dependent on a depraved state of the gastro-intestinal mucous membrane, of which the lodgement of fæces is not the most serious effect, or that to which the physician should primarily and principally direct his attention. We employ purgatives in such cases merely to unload the intestines, to remove accumulated secretions, and not with any intention to remedy the lesion which exists, which is more certainly rectified by the judicious employment of mercurial alteratives.

We have frequently observed the co-existence of erysipelas, phlebitis, and other local morbid states, with abdominal derangement; the latter having been known to exist prior to the former, or the fever which accompanies them, and, therefore, independent of both. The frequency of the coincidence awakens a belief in their connection; and the result of treatment directed towards remedying the abdominal lesion justifies the opinion, that that connection is relationship. We

have spoken of alteratives as a class of remedies on whose power to rectify the abdominal derangement we place considerable reliance; and we are the more encouraged to do so, because we have generally observed that slight affection of the gums, or fætor of the breath, and the commencement of a return towards health, are simultaneous events. Although not quite relevant to the subject, we may be allowed to remark, that, in the treatment of delirium tremens by calomel and opium, abatement of the symptoms has almost uniformly been coincident with the characteristic effects of the mercurial. This has been so much the case, that, to us, it appears a good fact on which to ground our prognosis, however slight the change may be. It is an evidence that the constitution is still susceptible of the influence of remedies.

Derangement of the biliary organ is frequently associated with the lesion of the stomach and bowels referred to. Whether it be affected primarily or secondarily, the result is the same: for once established, the two diseases react on each other, and the discord is kept up. Each lesion becomes a strong reason for the persistence of the other, and our object is to remove one, for thereby we shall more readily silence the other. We do not pretend to know the cause of the primary lesion, for it may or may not depend on the causes to which it is commonly attributed; but of this we are assured, that the diseases may go on, though the primary cause has long ceased to operate, for two lesions exist; they are springs, and the pendulum which vibrates between them, striking alternately agrinst each, is sent back with almost undiminished force. But vital strength will yield to continued calls for its exertion; by degrees this energy will diminish; by degrees his reciprocal action will fade; in time it will entirely cease, and the patient be a miserable dyspeptic. The two lesions are now quite independent of each other, and for their removal a doubtful and experimental and complicated treatment is required.—*Edin. Med. and Surg. Jour.*—*Medical Examiner of* December 16, 1840.

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LOUISVILLE, FEBRUARY 1, 1841.

MEDICAL CONVENTION OF KENTUCKY.

We have twice referred to a proposed Convention of the physicians of Kentucky, called by the Medical Association of North East Kentucky, to be held at Frankfort, on the first Monday of January. It was held; and we write this notice on board the steam boat, returning from it.

About sixty physicians attended, and their deliberations were characterized by harmony, and a zealous prosecution of the object for which they assembled. That object was the formation of a State Medical Society. To this end a Constitution was reported by the Committee raised for that purpose, and after careful examination adopted, we believe, unanimously. A system of rules and principles of professional intercourse was made out, and prefixed to it; and the corresponding secretary was ordered to transmit a copy of both to the seat of justice of every county of the State, directed to the physicians of the county.

The adoption of these, and the formation of district associations, will make them members of the State Medical Society. Thus the representative principle has not been admitted into this organization. We congratulate the profession of our state on this exclusion, convinced that the meetings of a state society composed of *Delegates* can never be as profitable, as meetings which embrace a large number of the profession. We hope and trust that our brethren throughout the State may so far

approve of what will be sent to them, as to co-operate in the formation of the proposed society; and afterwards attend it numerously.

During the sitting of the Convention a committee appointed for that purpose, reported several resolutions on the subject of medical education, and the preparatory acquirements of students, which were unanimously adopted.

Since the above was written we have received a printed copy of the Constitution adopted by the Convention, with a resolution for carrying it into effect which, as interesting to our readers in Kentucky, and, perhaps, in other parts of the West, we here extract:

"This Society shall be known by the name of the *State Medical Society of Kentucky*, and shall convene, annually, on the Wednesday succeeding the second Monday of January, in the town of Frankfort. The President shall call the Society to order at 10 A. M., and the meetings shall continue from day to day, till the business of the Society be concluded.

"*Exercises of the Society.*

"The exercises of the Society shall consist of papers, or addresses, on some subject connected with the science of medicine. A paper shall be required from at least six of the District Societies, which shall be selected by the President. Reports shall be requested from the District Societies generally, upon the diseases, medical topography, statistics, climate, botany, geology, and any peculiarities of their particular region—communications on points of especial interest and importance shall be requested from the aged and learned of the profession throughout the State.

"All Committees shall be appointed by the President, unless the business be of a very extraordinary nature, when the Committee may be selected by ballot.

"When, in the opinion of the President, it shall be considered of sufficient importance to the interests of the Society, he shall have power to appoint a called meeting, and shall require the Corresponding Secretary to advise the Presidents of all District Societies of the fact, at least one month previous to the appointed time.

"Twenty members shall constitute a quorum to do business.

"In all cases of difficulty in the District Societies, appeal may be had to the State Society, whose decision shall be final.

"No rule or regulation of this Society shall be altered, amended or repealed, nor additional regulations adopted at any meeting, but by a vote of three-fourths of the members present.

"No Society now in existence, or which may hereafter be formed, shall be permitted to hold connection with this, which shall not adopt the foregoing system for their government.

"No District Society shall adopt any rule conflicting with the above.

"All who hold membership in the District Societies shall be considered members of the State Society.

"*Resolved*, That the Corresponding Secretary of this Convention, address to the physicians of each county in the State, (directed to the county seats) a copy of the Constitution and by-laws formed by this Convention, accompanied with this resolution, and urge them to organize themselves *immediately*, into District Societies; the limits of which, shall be prescribed by themselves. And that, as early as practicable, they send to him a copy of their Constitution and by-laws, signed by the officers, together with a list of their members—and if their organization be in accordance with the Constitution aforesaid, he shall thereupon enrol their names as members." D.

BILIOUS AND CONGESTIVE FEVER. BY A. M. KELLER, M. D., OF ALABAMA.

We lay before our readers the following extract of a letter from a scientific physician of the South. Y.

In the treatment of a strictly bilious fever, purgatives are our great reliance; and we need not ransack the materia medica for a variety. Calomel, uncombined, is the mildest and most effectual—to be repeated as long as bilious evacuations appear. In long continued cases, particularly where there is no sensible remission, where calomel has been freely given, I have been in the habit of combining quinine and calomel together—3 grs. quinine, 4 of calomel—given every two hours. I look upon quinine as the most powerful sudorific in the whole catalogue of medicines. In large doses it acts as a sedative; for in numerous instances, I have seen the pulse reduced to a natural state in a few hours by its use. J. H. had been sick twelve or fourteen days with bilious fever, during the last eight of which, no sensible remission had taken place. He had been freely operated upon by mercurial purgatives, given both in full and broken doses, without any abatement of his fever; when, becoming alarmed for his safety, I commenced the above combination of calomel and quinine. When the first dose was given, his pulse was about 100 per minute; by the time he had taken the third dose it was at 75, the natural standard with him, and the whole surface was bathed in profuse perspiration, so much so, that it became unpleasant to the patient, and he strongly insisted on the windows being opened, on fanning, &c. By the time he had taken some thirty grains of the quinine, I thought it prudent to wait for the operation of the bowels, which soon took place effectually, and he had no more fever. The quinine was continued alone for several days. I look upon it as the only febrifuge we possess, strictly so called.

Congestive Fever.—Much has been said and written about this truly formidable disease. It is so insidious in its attack, and puts on, when it does approach, so exactly the form of chills and fever, that one who has

never seen it would treat it as such; and would not, in all probability, discover his mistake until the disease had gone beyond his reach. It may be known by the greater severity and permanency of the chill, and a death-like coldness and lividity of the whole surface; great derangement of the sensorial functions, almost from the commencement. The tongue exhibits a most peculiar appearance—generally very little coated but very moist, and of a *purplish colour*; this last I consider almost a certain diagnostic of the disease. It generally, if fatal, terminates with the third chill; this generally happens about the fourth day. Sometimes I have known it to be constituted of a rapid succession of chills, destroying the patient in forty-eight hours. When called to the patient you must use no half-way remedies. Give calomel in large doses every two hours, until it operates on the bowels; if the discharges are not, dark, pitchy, and consistent, check them at once by an opiate injection and re-commence the calomel in increased doses, and never stop until the discharges are right. To relieve the intense suffering of the patient from cold, give him hot and strong French brandy toddy ad libitum. If, notwithstanding your efforts, collapse supervenes, put your patient into a strong mustard bath; if that fails to excite the pulse, there is a last remedy you may resort to—what in medicine may truly be called a hydrostatic paradox. Strip your patient entirely, and dash about fifty gallons of cold water over him as hard and fast as you can; wipe hastily with warm towels and wrap him in hot blankets, and use any other exciting measures, as friction to the feet and hands. Make a black liniment as follows:

Olive oil ℥iss.
Spts. turpentine ℥iss.
Sulph. acid ℥iii.

Mix in an open vessel—to be rubbed on warm.

If the pulse revives, keep it up if you can with brandy; if it sinks again or does not rise from the first cold dash, try it again; and as long as your patient has life, for if this does not save him nothing will. I have seen it tried often, and in two-thirds of the cases it proved entirely successful. One case, I recollect, of a favorite servant; the family had despaired of her life, and had removed her to an adjoining room to die. She was entirely pulseless, and had been so for hours; the cold dash was applied twice in an hour, and in three hours the excitement was so great as to require the free use of the lancet; in a few days she was as well as ever. If cold water fails to excite in this last stage, you may consider the case of your patient hopeless.

January, 1811.

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Thomas L. Rives,	Tennessee,	L. M. Hospital.
Edmund P. Rucker,	Tennessee,	Drs. Crosthwait & Wendel.
Francis A. Rice,	Tennessee,	Prof. Gross.
James T. Richardson,	Tennessee,	J. W. Richardson, M. D.
John L. Roper,	Tennessee,	H. Dockery, M. D.
John W. Raleigh,	Kentucky,	Jos. W. Knight, M. D.
Charles G. Raleigh,	Kentucky,	Jos. W. Knight, M. D.
Ebenezer Rondeau,	Illinois,	W. Sim, M. D.
Hugh Rodgan,	Kentucky,	E. D. Force, M. D.
Lucius D. Rogers,	Mississippi,	M. B. Rogers, M. D.
William Reader,	Indiana,	D. G. Mitchell, M. D.
David B. Rice,	Illinois,	Dr. J. B. Kyle,
Henry Rosengarten,	Kentucky.	
James W. Starnes,	Tennessee,	J. W. Richardson, M. D.
Robert S. Strother,	Kentucky,	B. Harrison, M. D.
John B. Snelson,	Tennessee,	Dr. Wm. R Snelson.
Nicholas E. Scales,	Tennessee,	Thos. R. Jennings, M. D.

Names.	*Residence.*	*Preceptors.*
JOHN B. SCOTT,	Mississippi,	Drs. Scott & Coleman.
ROBERT A. STONE, M.D.,	Tennessee.	
PATRICK SLATTERY,	Indiana,	N. Q. Hall, M. D.
VOLNEY SPALDING, M.D.	Iowa Territory.	
R. S. SWEARENGEN,	Alabama,	B. J. Woodward, M. D.
WILLIAM C. SNEED,	Kentucky,	Lewis Sneed, M. D.
WILLIAM SHERER,	Kentucky,	Practitioner.
WILLIAM SNODGRASS,	Kentucky,	Drs. Jackson & Crump.
WILLIAM STAPP,	Kentucky,	Drs. Fields & Gaither.
CALVIN A. STANFIELD,	Tennessee	P. H. Mitchell, M. D.
CHARLES R. SESSIONS,	Mississippi,	Dr. A. Keith.
JOHN S. SEATON, M. D.,	Kentucky.	
WM. K. SLOANE, M. D.,	Kentucky.	
ESSEX P. SPURRIER,	Kentucky,	Drs. Powell & M'Dowell.
WILLIAM SIMMONS,	Alabama,	Prof. Yandell.
J. W. STOUT, M. D.	Tennessee.	
JONATHAN J. TAYLOR,	Kentucky,	J. F. M'Millan, M. D.
SAMUEL P. TAYLOR,	Kentucky,	Dr. S. M'Donald.
ALFRED L. TOWLES,	Virginia,	L. C. Rives, M. D.
LOUIS R. THORNTON,	Kentucky,	J. R. Desha, M. D.
JOSEPH A. TRIMBLE,	Alabama,	F. H. Anderson, M. D.
SAMUEL A. THOMPSON,	Indiana,	S. Reed, M. D.
CHARLES S. TULEY, M.D.	Indiana.	
THOMAS F. TITUS,	Texas,	Jno. F. Smith, M. D.
FRANKLIN B. WALTON,	Tennessee,	Drs. Walton & Mulloy.
PETER C. WOODS,	Alabama,	Dr. A. R. Rogers.
ALFRED M. WYATT,	Kentucky,	J. W. Knight, M. D.
JOHN R. WATKINS,	Tennessee,	Prof. Yandell.
FREDERICK E. WILLIAMS,	Mississippi,	R. C. Hancock, M. D.
HUGH T. WILLIAMS,	Kentucky,	Dr. T. Holmes.
RICHARD P. WILLIAMS,	Arkansas,	Dr. B. P. Jett.
ROBERT S. WENDEL,	Tennessee,	Prof. Yandell.
EZEKIEL F. WILSON, M.D.	Kentucky.	
JOHN C. WELLS,	Missouri,	Dr. R. H. Woolfolk.
WILLIAM C. WOOLFOLK,	Kentucky,	B. F. Summons, M. D.
HENRY E. WELBORN,	Tennessee.	W. N. Morgan, M. D.

Names.	*Residence.*	*Preceptors.*
John Walker,	Kentucky,	J. Joplin, M. D.
George W. Wilkerson,	Tennessee.	
Robert S. Wilson,	Tennessee,	F. Stith, M. D.
Thomas Wathen,	Kentucky,	Dr. F. Brady.
John C. Whitlocke,	Kentucky,	J. A. Steele, M. D.
H. M. Whitaker,	Kentucky,	J. H. Merriwether, M. D.
George A. Wilson,	Ohio,	Drs. Brown & M'Nall.
Oliver M. Wozencraft,	Arkansas,	Practitioner.
Thomas B. Woodward,	Indiana,	J. V. Wayman, M. D.
H. M. Wakefield, M.D.	Kentucky.	
David W. Yandell,	Kentucky,	Prof. Yandell.
G. W. Young,	Tennessee,	Jno. N. Jelks, M. D.
Hugh H. Young,	Kentucky.	

RECAPITULATION.

1.	From Kentucky,	71
2.	" Tennessee,	51
3.	" Alabama	21
4.	" Indiana,	20
5.	" Mississippi,	17
6.	" Ohio,	8
7.	" Missouri,	5
8.	" Illinois,	4
9.	" Arkansas,	4
10.	" Georgia,	2
11.	" S. Carolina,	1
12.	" Virginia,	1
13.	" New York	1
14.	" Texas,	1
15.	" Iowa Territory,	1
	Total	208

Louisville, January 27th, 1841.

AN

INTRODUCTORY DISCOURSE

TO A

COURSE OF LECTURES

ON

CLINICAL MEDICINE

AND

PATHOLOGICAL ANATOMY;

DELIVERED AT THE OPENING OF THE NEW

CLINICAL AMPHITHEATRE OF THE LOUISVILLE MARINE-HOSPITAL,

NOVEMBER 5TH, 1840.

BY DANIEL DRAKE, M. D.

PROFESSOR OF THOSE BRANCHES, IN THE MEDICAL INSTITUTE OF LOUISVILLE.

PUBLISHED BY THE CLASS.

LOUISVILLE, KY.

PRINTED BY PRENTICE AND WEISSINGER.

1840.

TO THE

MEMBERS OF THE MEDICAL CLASS:

Gentlemen,

In yielding to your respectful request to be furnished with a copy of my Introductory Lecture, for publication, I am not governed by my own conviction of its containing any thing so new or striking as to merit that distinction; but by two other considerations: First—It may do something towards promoting the study of Pathological Anatomy, in the West and South; and, perhaps aid you, after graduation, in the prosecution of Clinical Observations. Second—Its publication will contribute to make known the fact, that the Professors have erected an amphitheatre, in which the examination of patients can be conducted in a manner far more advantageous to students of medicine than in the wards of the Hospital.

Most respectfully,

Your friend and preceptor,

DANIEL DRAKE, M.D.

Medical Institute of Louisville,
December 10th, 1840.

INTRODUCTORY LECTURE.

YOUNG GENTLEMEN,

The object of the Introductory Lecture which I am about to deliver, is to explain, especially to the younger members of the Class, the nature and importance of the branches of medical science confided to me by the Managers of the Institute, and to make known to you the means and facilities which have been recently provided for their prosecution.

By CLINICAL MEDICINE is understood the study of diseases at the bedside of the sick, which may be carried on either in private practice or in Hospitals. Most of you have been more or less engaged in the former mode with your preceptors, and you are now about to engage in the latter, which is often called Hospital medicine. I trust that none of you will think his previous opportunities in private practice have been such as to render an attention to Hospital medicine superfluous. I am aware that many of you have been reading with gentlemen of science and skill, for I have the pleasure of knowing them; but all cannot have had that advantage, and even those who have, may still find an attention to hospital practice eminently beneficial.

In private practice many restraints are imposed on physicians, and still more on students. Enquiries which may be freely made in hospitals are often inadmissible in private families; the presence of various members of the family and of visitors frequently limits our physical examinations; records of the symptoms and prescriptions from day to day are seldom kept; and the physician is not, in general, at liberty to expound to his pupils at the bedside of the patient the reasons for his prescriptions: finally, the student very seldom has the opportunity of making regular visits, and, for the most part, is taken to see cases of an advanced and dangerous character, when the symptoms are so numerous and complicated that he is incapable of analyzing them, and merely looks on with a mixed feeling of curiosity, wonder and despair. Thus, under the most favorable aspect in which we can contemplate clinical opportunities during private pupilage, they are exceedingly imperfect, and I ought to add, sometimes injurious. This last remark involves no censure of private preceptors, as I will make apparent to you in a moment. When the student accompanies his teacher to the bedside of a patient, he *sees* the symptoms and *hears* the prescription it is true, but very often knows little more of the case. This being repeated, an association of ideas is, at length, established in his mind between certain phenomena and certain medicines; so that when the for-

mer present themselves they suggest the latter; but this is not science, any more than it is science, for a mariner to predict from a certain aspect of the sky that a storm is impending, while he is totally ignorant of the principles of meteorology. The symptoms of disease are but the signs of disordered function, and the mind should first contemplate them in their connexion with the organs and their functions. They must be *interpreted*, and then the reasons for the prescription become intelligible. But, as I have said, these explanations cannot in general be made at the bedside in private practice, and, therefore, many students grow up to be, what in name they despise, mere empirical practitioners.

They enter on the duties of the profession as symptomatists and therapeutists; when, in reality, they should be symptomatists, therapeutists and *pathologists*. Every physician who is not a pathologist is a routinist. On the other hand, although every pathologist is, as far as pathology goes, a man of science, he is not necessarily a good therapeutist, that is, practical physician. His knowledge is not sufficiently extensive. It comprehends pathology only, when it should embrace two other branches. Now it is the object and duty of a professor of Clinical medicine, to teach these branches in connexion. It is *my* function, young gentlemen, to teach them to *you*, and if I should not, I shall neither discharge the duty assigned me, nor fulfil the expectations under which you have done me the honor to become my pupils. To prophesy that I shall be successful, would be arrogant: to predict that I shall fail, would be absurd. But it involves neither arrogance nor absurdity, to say, that nothing can be accomplished without a conjoint and earnest effort. A sense of duty to you, ought to stimulate me to such an effort—and a sense of duty to your future patients, should animate you to similar exertions. Time will tell to our friends and society, how far we have respected the obligations of conscience, benevolence and professional honor.

Every co-operative effort, young gentlemen, requires a plan of operations, and a common understanding of the means by which it shall be carried on. Ours will be the following: we shall bring from the wards of the Hospital a selection of such cases as seem likely to be most instructive, and make each case a special study. Some of them will be simple and easily disposed of; but others will be obscure or complicated; confused in their diagnosis, uncertain in their pathology, difficult in their indications of cure—and it will be necessary, of course, to dwell patiently upon them. They must be kept before us for protracted observation, and made the subjects of deep and deliberate thinking. Our attention must be concentrated, sustained and active; the lapse of time must be disregarded; and every student must feel as though the development of the case depended on himself, as in battle every soldier should regard himself as the Achilles of the conflict.

This attention, young gentlemen, cannot be given by proxy, any more

than you can nourish your bodies, by employing an agent to eat your food. Professional acquirement, like professional honor, is strictly personal; and each must earn his own share. On this point let no student deceive himself. To borrow a further illustration from the science of war, when a regiment has acquired renown, every member of it participates, although every one may not have been valorous, for it is estimated in the aggregate; the stout in heart and the timid in heart, are grouped together, and the latter appropriate to themselves a portion of the fame of the former. But this can never happen in medical classes. Your names, it is true, are interwoven on our matriculation book, you sit side by side in our amphitheatres, you nod to each other from the opposite benches, under a dull lecture, and pierce the depths of each others minds with glances from animated eyes, when new ideas are awakened in you by the eloquent voice of truth; but the day will come when the wheat must be separated from the tares—when the magnetic wand of interrogation, extended along your compact lines, will draw out the pure metal and leave the dross behind.

But the analysis of your collective body is then only begun. You separate, and disperse upon various theatres of action; and are then called upon, single handed, to battle with the destroyer; each one is then for himself, and his success will correspond to his scientific chivalry. He must be covered with shame or glory, according to his own achievements. Then will be the time, young gentlemen, that fountains of bitter regret will burst forth from the depths of memory, to deluge your hearts and blight your happiness, if you have suffered the precious opportunities of your pupilage to pass away unheeded. Lost property, lost reputation, even lost purity, may be recovered, but let me tell you, lost time and opportunity are gone forever; and every moment which thus flies away takes with it an atom of your prospects, as every emanation from the rose carries off a particle of its fragrance. Even the neglect of a single case in this *clinique*, may exert on your future professional destiny, an effect of which, as young men, you cannot form a conception. The diligent study of a particular form of disease within these walls, may enable you to combat it successfully, when you enter the chambers of affliction, and at once establish you in the confidence of society; while a failure, from ignorance, to do so, might doom you to degradation. I tell you, young gentlemen, that you may be attentive to what is brought before you, *if you will*. Did you not command your attention in making your way to this place? You are not machines, and compelled to move at the bidding of an external force! Do you not feel in yourselves a power, by which you can do, or refrain from doing? Are you not able to turn a *looking* eye upon what is presented, and a *listening* ear to what is said, or withdraw your attention from both, as you may choose? Mere seeing and hearing, let me warn you, will not answer: you must *look* and *listen*.

You may see a patient before us, and hear an examination going on, and still leave the amphitheatre without any adequate knowledge of the case; because you were neither *looking* nor *listening*. Your attention was taking its siesta, or admiring the idle creations of a wayward imagination, when it should have been sitting with its tablets in the eye and ear, recording all that might fall upon both.

To render your clinical opportunities effectively useful, it is indispensable, young gentlemen, that you should be punctual in your attendance on the Hospital. A professor in the halls of the Institute often devotes several minutes at the opening of a lecture to examinations on the last, and if you are late in arriving you only lose the advantage (in the technical slang of the lecture-room) of being *stumped*; an advantage, however, so great, that every student should long after it as his young heart yearns for the highest honors of the school: but no such recapitulations can take place in the clinical hall. We shall begin with the patient before us, and he who is not here in time, will lose all, be it much or little, that transpires before his arrival, and lose it irrecoverably—you must, then, move with celerity to the Hospital. When you are on your way and are about to cross a street, it will frequently happen, that a carriage is approaching to traverse your path, and sometimes even a procession will be at hand. Now these little events will divide you into three Classes. 1st. Some of you observing the approach of the carriage, will determine not to be interrupted, and, therefore, quicken your walk, and finally perhaps run across the street, directly in front of the horses. To these the obstruction will prove a stimulus, and they may reach the hall, even before the time, and secure a front seat. 2d. Others will not quicken their pace, but stop on the corner till the carriage passes by. These may arrive, by the time the first patient is taken out of the *clinique;* 3d, and lastly, there will be others who, even if they see a long procession about to intersect their path, will make no active effort to cross before its arrival, but stand gazing, till the whole has passed; they will then move on conversing with each other on what they have seen, and arrive perhaps about the time the last patient is brought in; but observing that the eyes of the Class were directed upon them, they will, the next time a similar interruption happens, conclude not to prosecute the visit, but spend the remainder of the hour in a stroll about the city. Thus they will lose a prescribing *day*. A lost elementary lecture, by industry in reading, and the aid of a fellow student, may be in some degree made up; but a lost prescribing day, causes a permanent deficiency in the chain of *data*. In the lecture rooms of the Institute, much of your labor is a meditation on previously acquired facts; but our business *here*, is to observe as well as *meditate*; to collect *new* data, and reason upon them at the moment; and each student should take them in, through his own senses, as well as reason upon them with his own mind.

Still further, you ought not to rely upon your memories, nor upon the hospital records, read from time to time in your presence. You should keep your own clinical registers. Seated as you are, there can be no difficulty in doing so, and you will be without excuse if you neglect it. Such registers will be among the most valuable documents you can carry home with you—transcripts from nature, and records in some degree of your own experience; or, at least, of your own observations. When a patient is cured, the minute history of the case will enable you to judge how far the treatment is applicable to *similar* cases of your own; and when he dies, the same history will enable you to detect the errors of treatment which have, perhaps, led to that melancholy event, whereby you will avoid them in your own practice.

On this head, I will only add, for the information of all who may aspire to the honors of the Institute, that our examinations preparatory to the awarding of those honors, will in future embrace a reference to the clinical teachings in this Hall.

Much of what I have said, is applicable not less to Clinical Surgery than Clinical medicine; but my able coadjutor, who is about to assume the care of the sugical ward of the Hospital, and whose duties, not less than my own, will be discharged in this amphitheatre, will in his private introductory speak for himself.

We come now, young gentlemen, to the second division of our professorship, PATHOLOGICAL ANATOMY. The association of this with CLINICAL MEDICINE, so far from being arbitrary, is altogether natural. Almost every sick person either recovers or dies. Under the former issue, his case is consummated with his discharge from the Hospital; under the latter, by a *post mortem* inspection, which will always be made, when the body is not claimed by friends, and taken away for private sepulture.

Now what is the object of a *post mortem* examination? It is simply to ascertain to what extent the healthy have been transformed into diseased structures; and from these observations, to deduce the seat and the mode of morbid action, which constituted the disease. Of this disease, the symptoms were the external manifestations, during life—the morbid appearances are the internal manifestations, revealed to us after death. We acquire an *a priori* knowledge of its pathology, by the symptoms—an *a posteriori* knowledge, by the derangements of the organization and the organism. Thus, within the walls of a Hospital, not in the halls of our medical schools, are the tests of doctrines brought to bear upon them. Here, and here only, do we see displayed the power and value of the *experimentum crucis*.

The pathological anatomist sits judge over the Clinical practitioner, and renders a decision from which there is no appeal. The scalpel pierces the

dead body, and the clouds of false doctrine and error which over-hung the case are dissipated, as were the sorceries of the great deceiver, when he was touched by the spear of Ithuriel. The history of no fatal case is complete until the pen of pathological anatomy inscribes upon its last page those facts, which either condemn or justify him who pronounced its diagnosis and conducted its treatment. Thus, the revelations made by this science are of the most sober and momentous character—a chapter of truths connected with the mortal illness of a human being—truths which bear directly on the character and conscience of those to whom the life of that fellow creature was entrusted; and hence the clinical dissecting room has a character of professional seriousness, scarcely less impressive than that moral solemnity which should always be present within its walls. Pathological Anatomy is the *new* tribunal of practical medicine; and well would it be for the interests of truth and humanity, if every culprit could be brought to its bar. But it does not merely applaud, acquit and condemn—it likewise instructs, and the lessons it teaches can be learned from it alone.

By the symptoms we conjecture the mode of morbid action, and the organs most affected; by the effects of our medicines these conjectures are strengthened into opinions; by pathological anatomy they are established as truths, or rejected as errors. Without the *data* supplied by this science, there can be no sound pathology, and without sound pathology, there can be no consistent and successful practice. Thus, although pathological anatomy cannot directly teach us to prescribe, it supplies materials towards a system of theoretical medicine which are indispensable; and the want of which materials, more than any other deficiency, has retarded the creation of such a system. Viewed under this aspect, Morbid Anatomy assumes an importance unequalled by that of any other branch of the profession, except healthy anatomy, which by common consent is the *elementum sine qua non* of medical science; for it not only constitutes the lowest stratum of the basis, but likewise blends itself with all the materials of which the superstructure is composed.

As the fundamental branch, healthy Anatomy must be your first study; but it is not necessary that your knowledge of it should be *very* great, before you commence the study of morbid anatomy; for you will find that every *post mortem* inspection, will enlarge your acquaintance with the normal state of the organs, although its object is to trace out the abnormal. You will realize even more than this. The memory of mere natural structure fades away more rapidly than any other memory of the medical mind. Physiology, to some extent, contributes to the permanence of our anatomical knowledge, for when function and its laws are associated with organization, the anatomical descriptions abide with us much longer; but, it is not till we see the organs in desolation, and compare their ruins with the fair forms and delicate textures, which they displayed in the days of their

prosperity, that the latter becomes indelibly impressed. This contrast is, indeed, the mordant which fixes both in the mind, and enables it to send forth deep and brilliant dyes of elegant scholarship.

Every pathological dissection is, then, a precious study of general and special anatomy, and the youngest member of the class, who seeks only to advance himself in the knowledge of structure, not less than the oldest who labors on the web of pathology, should give a willing and undivided attention to all the *post mortem* examinations which may be performed within these walls.

Nor can you study this science successfully in books alone young gentlemen; not even in that of my learned colleague, although the best, as I firmly believe, *for students of medicine*, that was ever published in any country. Paradoxical as you may esteem it, I affirm that it is even easier to study healthy, than morbid anatomy, in books; for description can make the former more intelligible than the latter. To be understood, abnormal and morbid structure must be seen. Who, that has not seen a pathological structure, till he meets with it in one of his own dead patients, is prepared to report it! And who acquires a knowledge of morbid appearances, out of a hospital! Can any one pretend, that in this or any other country, such knowledge can be acquired in private practice! It cannot; and yet, it is greatly needed *in* private practice. Not merely required by the demands which medical science makes on all its votaries, to contribute new means for its advancement—demands which every high-minded young man prepares himself to meet—but society itself will make special calls upon you—calls that will place you under the heaviest responsibility.

In the first place, notwithstanding the popular prejudice which so deplorably limits the cultivation of morbid anatomy, in private practice, there will often arise a panic in the public mind, under the onset of a new and strange epidemic, that will lead to a common consent and an expressed wish, that you should make *post mortem* inspections, for the purpose of devising a more effective plan of treatment. Secondly: Every now and then you will be called upon to inspect the body of some favorite child, or some distinguished man, who has died of an uncommon disease; or of one of the members of a family in which a dangerous hereditary tendency is supposed to lurk. Finally, you will be frequently called upon by coroners and other legal officers, to examine the bodies of persons found dead under suspicious circumstances, as from diseases supposed to have been induced by poison, or violence, and concerning which you will be required to testify in court.

Look at the responsible position in which these calls will place you. In the first case, if you incorrectly observe or interpret the morbid appearances, and frame a method of treatment on observations thus inaccurately made, the lives of thousands may be sacrificed. In the second place, if

you make ignorant, or even awkward reports, on the lesions of structure found in individuals whose rank in families or in society leads to the publication, by conversation or otherwise, of what you say, it will inevitably injure your professional standing. In the third place, should you make an erroneous report, in a case of medical jurisprudence, you may bring disgrace and punishment, even death itself, upon an innocent person—the bare anticipation of which should fill every honorable and conscientious mind with dread; while the realization of such a mistake, would rend your hearts with emotions of grief, reproach and horror.

Do not flatter yourselves, that because the prejudices of society oppose your practising *post mortem* examinations, it will, therefore, tolerate your ignorance of morbid appearances; for no such consistency exists. Society may withhold the straw, but will still require the brick. It assumes that you have the requisite knowledge, all its opposition notwithstanding; and if you have not, you must expect its condemnation.

Add these considerations, young gentlemen, to that which I presented as the greatest—the indispensable necessity of pathological anatomy to the formation of systems of pathological science, and then recede if you can from the conclusion, that the branch which I am now commending to your notice is of surpassing importance.

You may say, however, that you know many *popular* physicians who are ignorant of it, which I grant; but do you know *any scientific* physician, in whose mind there exists so extended a blank! I hope, young gentlemen, you will all be *popular*—but I hope still more ardently, that you will all be *scientific*. You should recoil from the thought of popularity without skill. Science, humanity, and courteousness, are the three great elements of sound and desirable popularity, but the greatest of the three is science.

Clinical Medicine and Pathological Anatomy are sciences of observation. The first requisite for accurate observation is active attention, on which I have already sufficiently dwelt.

The second is an unbiased mind. In coming to the bedside or to the dissecting table, you must leave your prepossessions and prejudices behind. If you do not, you are liable to see things under a false aspect. This is particularly the case whenever we are engaged in minute inspections. A previous expectation, or even a wish, may so engraft itself upon our faculties of observation as to mystify them. I will give you a familiar illustration. When I came to this city a year ago, a drought prevailed every where, except in the Medical Institute, and no water flowed along the streets, which as you know are nearly level. As it is natural that the water falling upon or discharged into them, should flow *towards* the river, and especially as I had lived in a city where such was the case, I presumed that the water from Chesnut street flowed off to the north; and as I passed and repassed between the Institute and the Hospital, I *saw most satisfactorily*, that the cross streets declined from that scientific avenue to

the river. But soon afterwards there fell a copious rain, and to my surprise I observed the water flowing to the south, across Chesnut street from Walnut; when I immediately *satisfied myself*, that the streets dipped in *that* direction.

In the third place, every case and every dissection will offer to your observation many things in common, while each will present something peculiar. This classification, if such it may be called, should be borne in mind, and while you *observe* the *former*, you must *scrutinize* the *latter*. The symptoms which are diagnostic of the case, and the lesions of structure which rendered it fatal, should have in your minds a special assignment; as, in the mind of my friend, the professor of Materia Medica, and other distinguished botanists, a few of the characters of each species of plants have a special lodgment, and serve to distinguish it from all others, with many of which it may have numerous characters in common.

In the fourth place, although I have said that Clinical Medicine and Pathological Anatomy are matters of observation, I must add, that medicine, in the full acceptation of the term, is a science of reflection not less than of observation; and, that while you should engage in the latter without any special or favourite theory, which through thick and thin you are determined to support, it will be your duty not merely to collect facts, but to refer them to the principles which they are fitted to sustain. In this way you not only secure them, but make them immediately useful. They are the aliment of the mind; but they can impart no nourishment till they are distributed and deposited. If merely lodged in your intellectual stomachs, they will no more promote the growth of your mental faculties, than food would nourish your organs if it remained in your corporeal stomachs, instead of taking the course of the circulation. And, as the digestive organs when engorged cannot react on the load, and by decomposing prepare it for distribution, so if the receiving faculties of the mind collect without handing over to the distributing, they will soon become oppressed, and the whole mental economy be disturbed.

Let us now pass to other views. The clinical division of my chair does not embrace Surgery, but the anatomical division is as closely allied to that science as to physic; and contemplated in its connexion with that very important practical branch of the profession, it acquires a new interest. No one can be acquainted either with the institutes or practice of Surgery without a knowledge of pathological anatomy: no one can trace lines of distinction between these two branches, so much is common to both. It is not the function of the pathological anatomist to dress a wound or splint a fractured limb; to tie an aneurismal artery; to remove a cataract, or open the iris; to extract the sequestrum of a necrosed bone, or extirpate a tumour; but it *is* the function of the pathological anatomist to note the lesions of structure which render these and other operations necessary. Thus morbid anatomy is connected on the one

hand with the diseased actions, which fix the attention of the physician, and on the other, with the diseased structures which demand the attention of the surgeon; and while you are employed in *its* study, you are preparing yourselves for the duties of both of those.

Further, our science lends a helping hand to the chair of obstetrics. What are the various deformities of the pelvis, and the organic derangements of the ovaries and cervix uteri, but cases in pathological anatomy! And are not the congenital defects of the fœtus—the imperforate sphincters, the club-feet—the cleft lip and palate—the capsular cataracts and the spina bifidas, equally the objects of that science!

Again. Morbid anatomy claims an affinity with Materia Medica. It detects those permanent derangements in the structure of organs, as the heart, the lungs, and the bowels, which not only render medicines unavailing, but admonish the practitioner, to administer those of a debilitating character, with a sparing hand, in as much as lost strength, with visceral derangement, is with difficulty recovered.

Once more. The teacher of the Institutes cannot dispense with the aid of Pathological anatomy. The facts which it supplies are indispensable to the general views in the philosophy of medicine, which it is his duty to put forth, while many of the functions have been illustrated, chiefly by noting the lesion which they suffer from lesion of the organs.

Lastly. It contributes to Animal Chemistry a variety of new products for analysis, such as altered secretions, cretaceous deposits, biliary concretions, urinary calculi, and the heterologous tumors, thus enriching that science with new conquests, and, in turn, borrowing from it the means of advancing its own researches.

Thus, there is not a division of the science of medicine, to which pathological anatomy is not allied—not one to which it does not lend assistance, though in very different degrees—scarcely one which does not, in turn, contribute to its advancement.

Such a branch of science, young gentlemen, must be worthy of your profoundest attention. You should not regard its study as optional. A proper estimate of its rank and value will leave you no such option; but impose its study as a bounden duty. Such is now the judgment passed upon it by the most enlightened members of the profession, both in the old and new world. What is it so much as pathological anatomy, that draws students from all parts of Europe and the United States, to Paris! What but this gives more than half their value to hospitals, as auxiliaries of medical schools! And how great are the benefits which these public charities confer on students of medicine and surgery! What a Senate house is to the ambitious young statesmen, the Hospital is to the young physician and the young surgeon. It is as the herbarium to the student of botany—the hall of justice to the student of law—the observatory to the young astronomer.

I am happy to tell you, gentlemen, that the Faculty of the Institute, have been and still are, deeply impressed with these great truths; and are determined to render the public charity, near which we are now assembled, subservient in the highest possible degree to the interests of the school. In this object, the Mayor and City Council, and the Managers of the Institute, concur and co-operate with the Faculty. Under an arrangement between the first and last, the professors have erected the amphitheatre in which we are now assembled, and this day solemnly dedicate to the study of Clinical Medicine, Pathological Anatomy, and Operative Surgery. They have thus opened a way for the advantages of the Hospital to flow out upon you in a more copious current than could otherwise have issued from that fountain. It is not my intention to speak invidiously; but justice to ourselves requires me to say, that the arrangements which we have now consummated do not exist in most of the schools of the United States which are connected with Hospitals, while many have no Hospital at all; and that although some of these institutions contain more patients, not one, of which I have any knowledge, has adopted a more excellent method of rendering its sick and its dead available to the improvement of the pupils by whom it may be visited.

The erection and opening of this Hall may, indeed, without ostentation, be regarded as an era in the history of medical instruction in the West. It completes the circle of opportunities, and prepares the way for making those opportunities as precious and productive to the student, as those afforded in any other city of the Union. Henceforth, there will exist no difference between your young *alma mater*, and the oldest schools of the nation, but what is found in the men who administer here, compared with those of the more ancient seminaries. Of my learned colleagues I need say nothing, as so many of you have already attended on their teachings. I am bound, however, to declare, that but for the activity and enterprise of our distinguished professor of the Institutes, this amphitheatre might not, by this time, have had an existence. I regret that an abler man than myself is not to be the chief minister at its altar. But institutions are perennial, while men decay, and are succeeded by others. *I am, at most,* but a pioneer, and at the longest, must soon give place to some one more worthy of the high and respectable station which I now occupy. I hope, young gentlemen, that you enter heartily with me into these views of the future. It is noble to combine the future with the present, and live and labour for both. Benevolence unites them into one. Ambition overlooks neither, and aims at both. Thus it is, that high conceptions of patriotic duty are formed, and effective efforts generated. Comprehensive views beget exalted aspirations, and these, in turn, prompt to great exertion. In minds thus tempered, the selfish and social become blended; and the interests which are personal, unite themselves with those which are public.

It is glorious to live *with* the age to which we belong, and *for* the ages that are to follow—to identify ourselves with communities of fellow-travellers,

labouring to do good—who thirst after knowledge—who are ascending to fame in generous emulation—or, in the fulness of time, descending to the grave in christian companionship.

But, perhaps, you cannot see in the future all that will be unfolded to you by a more ample experience. As we advance in life the prospect before us widens, and many objects become visible, which had been previously concealed. Thus, when the traveller descends our fairest of rivers, in its state of depression, he sees little else than the margin of its banks, and the tops of the hills which lie beyond; but when he makes successive voyages, as the spring floods gradually rise, he sees from higher points of observation many additional objects; till at length, when the swollen tide has raised him to its greatest elevation, he beholds extended plains on either side, which smile in cultivated beauty, and excite surprise and admiration.

It is delightful to contemplate the full and final establishment of an Institution of science and humanity, on such a spot, and under such influences, as must of necessity render it prosperous and permanent. Like all young seminaries, ours may experience those little reverses which develope energy and impart firmness of character; but onward and upward will be its career. Other schools may flourish, and new ones start into existence—for the mighty West is prolific; but the Institute must continue to advance; for it occupies itself on the means of its own advancement, and wastes not its energies in retarding others. When years have rolled away, many of *you* will return: some of *us* will then be in the grave; but you will find your *alma mater* still prosperous. Another cycle will be completed, and a few of you, whitened with the snows of many winters and bowed down by toil for the welfare of society, will revisit her; but those from whom you are now to take lessons, will be hushed in death, and new—I trust more eloquent—voices will echo through her halls. Your aged hearts will then mournfully ask, where are they whose accents fell upon the ear, in the joyous days of our youth? But your moments of anguish will be short, for a throng of happy pupils will surround and greet, and honor you as elder brethren; and your pulses will then beat high at the noble and cheering sight of a great medical University—ample in its resources, profound in its teachings, and exalted in its fame—from which the outpourings of science and humanity will flow in copious streams, among the untold millions of your native land.

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